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CORRECTION

The September 1956 Journal of Experimental Education should have been numbered Volume XXV, Number 1 instead of Volume XXIV, Number 5.

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A STUDY OF THE RELATIONSHIPS OF CERTAIN ENVIRONMENTAL FACTORS TO TEACHING SUCCESS

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SECTION I

INTRODUCTION

The Problem

THIS STUDY seeks to ascertain the relationships of certain environmental factors to teaching success. The environmental factors to be studied include the many conditions and facilities, present or absent, in a given situation that may influence the teacher's effectiveness. A potentially upsetting condition may be present or absent but a particular individual may, because of his temperament or philosophy of life, not be upset by it. Even though individuals vary greatly in adaptability to situations, it would seem desirable to ascertain the aspects of the environment to which teachers react unfavorably and express beliefs and attitudes which may influence their effectiveness.

Assuming that environmental factors expressed in an attitudinal manner may influence the effectiveness of a teacher, this study seeks to answer the following questions:

1. With what situational factors do teachers appear to be most satisfied or dissatisfied?
2. What situational factors seem to be associated with teaching success?
3. To what degree can teacher success be predicted on the basis of situational factors?
4. What situational factors do teachers think should be changed?

In order that we can effectively predict and control the behavior of people over a longer period of time it would seem advisable to know more about the situation in which people function. A better knowledge of the environment, and the individual's reactions to it, should lead to a higher degree of prediction and control.

It is common observation that some teaching situations are more complex than others. The recognition of the environment as an important aspect of living was pointed out some years ago by the sociologist W. I. Thomas (27). He indicated the areas in which the investigation of behavior problems may be profitably pursued, viz., "the attitudes, the values, the forms of adaptation, and the total situation."

In any study of human relations there is need of a psychology that provides adequate recognition of environmental factors. Such a psychology should give an adequate social consideration to relations and forces in a dynamic interactive situation. Lewin (16) concludes: "Every psychological event depends upon the state of the person and at the same time on the environment.... The experimental work of recent years shows more and more this twofold relationship in all fields of psychology. Every scientific psychology must take into account whole situations, i.e., the state both person and environment." Murphy (21) states, "It must be recognized that the slighting of situational differences has been a constant source of clinical and experimental errors; the clinical interview and the laboratory have both consistently failed to predict adequately the nature of social behavior that occurs in situations other than those in which the observations are originally made. The laboratory psychologist and the clinician have both conceived the individual as a system of events and tendencies carried around within the skin of the individual subject. They have both assumed that his delinquencies or his triumphs, his interests or his nervous maladjustments, result fully and simply from structured disposition within him." Murphy goes on to say that "a study of situations that act upon persons should be at least as full and as systematic as is a study of internal structures which respond to these situations."

Barr (3) indicates in a summary of recommendations for the study of the prediction of teaching efficiency that,

*The author wishes to express his appreciation to Dr. A. S. Barr for his constant inspiration, guidance and encouragement during the course of his graduate study and the completion of this investigation.

> More attention should be given to the situational factors in success. It is easier to succeed in some situations than others. More attention needs to be given to these situational aspects of efficiency.

McClusky and Strayer (19), using a teacher situation test, came to the conclusion that "practically every phase of the teacher's life, ranging from his relation to the community to his attitude toward equipment in the classroom, is involved in his adjustment." Barr and Low (17) found a positive correlation between the complexity of teaching situations and teaching success. Again, in a summary of recommendations, Barr (3) concludes, "It is probably erroneous to assume that specific acts are good or bad divorced from purposes, principles, persons, and situations...."

It would seem that in light of these psychological observations and the attitudes expressed as to the importance of environmental factors in predicting behavior, that this problem is one of paramount importance.

Research Directly Related to the Problem

The paucity of research directly related to this area of investigation is probably due to the elusive character and the complexity of the elements that are the components of the environment.

It is important to know the personal characteristics of an individual. Such knowledge enables one to understand, at least in part, the actions of individuals in any situation. It is becoming increasingly recognized, however, that this alone is not sufficient.

Lins (17) studying 58 women teachers in Wisconsin schools, using a composite of five supervisory ratings, reports a composite evaluation of the situation with a correlation of -.34. Garrison (10) concluded after investigating job satisfaction of 46 women college seniors who had just finished 8 weeks of practice teaching and 42 elementary women teachers in service that, "Although the teacher-pupil relationship is of utmost importance in relation to satisfaction, many other situations in the teacher's life affect the teacher's feeling of satisfaction." Simon (21) after studying the records of action taken in the dismissal of 769 teachers and administrators concludes, "They were unable to make satisfactory adjustments. The teacher's inability to adjust himself to the community or to the school environment will cause him to be unpopular with the pupils and parents and may cause boys and girls to dislike the subjects he teaches." Symonds (26) had 65 teachers write a paper telling how they solved their personal problems. The three problems most frequently mentioned in their themes, in order of frequency, were: feelings of inadequacy and inferiority, professional difficulties, and family relations. Since living does not occur in a vacuum it might be well to know in such cases what the situational factors were that lead to the buildup of these problems. Martindale (18) gathered data from 72 teachers by means of a Teacher Situation Inventory that contained 316 situational items. He attempted to ascertain the factors that presumably lay outside the personality of the teacher. He maintained,

> As individual teachers differ in many ways so do all schools and communities differ. Some schools are progressive while others are conservative; some communities are friendly, others aloof; some are tolerant, others exacting. Population makeup, wealth, cultural status, and many other factors create differences in schools and communities. Every school and community is unique just as every individual person is unique.
>
> It is logical to suggest, then, that some of the factors influencing teaching success might possibly lie outside the teacher's control and within her... Possession of certain factors commonly associated with teaching success is not sufficient to predict success; factors which predict success might be conditioned by the teacher's compatability with her teaching environment.
>
> Numerous instances of an apparently well-trained and well-qualified teacher failing in one community while succeeding in another can be cited by superintendents and placement officials.

Martindale reported a correlation of .19 between teaching success and satisfaction scores.

The work that has been done in the area of the situational factors as related to teaching effectiveness is inconclusive. Many studies have been reported that place the emphasis on personal factors operating in some poorly understood environmental media. The concern of this investigation is to identify certain environmental factors which may influence the prediction of teaching success.

SECTION II

DESIGN OF THE STUDY

A DESCRIPTION of the subjects, the instruments used to collect the data, and proposals for analyzing the data will be presented in this section.

Description of the Subjects

This study is a descriptive investigation of the situational factors that may influence the effectiveness of teachers. The subjects of the investigation were sixty seniors who had graduated in 1950 from a four-year course in the School of Education at the University of Wisconsin. The group is divided into two sub-groups: one group of 45 was composed of 45 individuals who responded to a questionnaire; and a second group of 15 non-responding individuals who were interviewed. A summary of the number of majors and minors by fields of study for the group of 45 is given in Table I.

From an examination of the data in Table I it can be seen that there was a concentration in the fields of English and General Science and an even spread in the other subject fields. In the group of subjects used in this investigation there were 22 women and 23 men. The men had an average age of 25.7 years with a range of 22 to 30 inclusive. Seventeen of the men had military service. Only two of the women had military service. The women's average age was 23.2 with a range of 21 to 30 years. The average age for both men and women was 24.5 years.

The personal information secured relative to the subjects of this study showed the following: The men had 21 younger or older brothers with a range in number of 1 to 4. They also had 21 older or younger sisters with a range in number of 1 to 3. The women came from families with fewer younger and older brothers, but there were more older sisters.

It appears in the matter of residence that the families of these persons were relatively stable and moved only within the confines of their community. The number of schools attended, the occupation of the parents, and population centers, in which they lived at one time, indicate this fact. Table II indicates the number of schools attended.

The subjects of this investigation lived in various sized communities as indicated in Table IV.

In the number of jobs held for pay the women worked most frequently in the clerical and sales areas. The men performed manual labor, and mechanical and factory work with nineteen having experience in the professional and technical fields.

As to the leadership experiences, the men held as many class officerships as women, the latter had more experiences as Sunday school teachers, tutoring others and serving on councils and committees. The men had most of their experience as camp counselors, Scouts, 4-H Club leaders with a scattering of Sunday School teaching and tutoring. While attending college there were nine men and two women who were self-supporting. Eleven of the men and five women were married at the time of this investigation.

Comparative data for the members of this study and a group studied by Lins (17) and Montross (20) are given in Table V. The grade point average for the required Education courses 73, 74, and 75, which includes practice teaching is given as well as the total four-year grade point average for various groups.

A follow-up interview was made of fifteen of the subjects of this investigation who did not respond to the Situation Inventory. In this group, selected at random, were four men and eleven women with major fields of study as follows: 4 in English, 3 in Physical Education, 2 in Art Education, 1 in Physics, 2 in Natural Science, 1 in Home Economics, 1 in Speech Correction, and 1 in History. Their minor fields were French, Spanish, Political Science, General Science, Mathematics, English, Botany, Zoology, Chemistry, Sociology, and Speech.

The mean grade point for Education 73, 74, and 75, and the four-year grade point average for the sample did not differ markedly from the larger group of subjects studied (Table VI).

It appears, from the data given in Tables V and VI that the subjects of this investigation, are representative of University of Wisconsin graduates.

Description of the Data-Gathering Devices

A. Teacher Situation Inventory

The Inventory (Appendix A-1*) used in this investigation was, in substance, the same as the one devised and used by Frank Martindale in his study of Situational Factors in Teacher Placement and Success (18). The directions for filling out the inventory were extensively revised, however, by the present investigator to facilitate the logical step by step procedure in completing the inventory. The format for the write-in space was also changed.

The revised inventory consisted of two pages of directions and nine sections of items listed under the following categories: the community, the people of the community, the school plant, the school administration, the school organization, the instructional materials, the faculty, the students, and the particular position. These nine categories made a total of 317 items. The aim of the inventory was to determine the degree of satisfaction and dissatisfaction of each respondent with respect to the several items and the reason for his responses. The last page of the inventory consisted of a request for general information.

B. How the Data Were Collected

The data for this investigation were secured

*All references to Appendices may be found in original thesis, Library, University of Wisconsin.

TABLE I

MAJORS AND MINORS

Field of Study	Men		Women		Total	
	Major	Minor	Major	Minor	Major	Minor
American Institutions	3				3	0
Art	3		1		4	0
Business Education	2		2		4	0
Chemistry	1				1	0
Economics		4		2	0	6
English	2	6	6	6	8	12
General Science		6	3	5	3	11
History	4	4			4	4
Home Economics			4		4	0
Languages			2	6	2	6
Mathematics		3	1	1	1	4
Music	1				1	0
Physical Education	4				4	0
Speech Correction	1		3		4	0
Others	2			1	2	1
Total	23		22		45	

TABLE II

NUMBER OF SCHOOLS ATTENDED

Type of School	Men				Women			
	Number of Schools Attended				Number of Schools Attended			
	1	2	3	4	1	2	3	4
Elementary	12	5	5	0	19	4	0	0
Secondary	19	3	0	0	20	3	0	0
College	16	4	1	1	18	5	0	0
Trade	4	0	0	0	1	0	0	0

TABLE III

OCCUPATIONAL STATUS OF WOMEN

Men	Women
Agent, Freight	Accountant
Agent, Purchasing	Baker
Assembler	Banker
Attendant, Filling Station	Bus Line and Transfer
Baker	Buyer
Buyer, Cheese	Clerk, Store
Clerk, Railroad	Dealer, Electrical-Plumbing
Farmer (3)*	Farmer (4)
Foreman, Brass Factory	Forewoman, Factory
Foreman, Paper Mill	Gardner
Grocer (2)	Janitress (3)
Investment	Manager, Office
Janitor (1)	Physician
Lawyer	Professor, University
Merchant	Saleslady, Auto
Minister	Scrap Metal Dealer
Oil Dealer	Superintendent of Schools
Postmaster	Trucker
Store Owner	
Total. 22	Total. 23

*Indicates the number in that category.

TABLE IV

NUMBER AND AVERAGE YEARS LIVED AT SOME TIME IN THEIR LIVES

	Men		Women	
Size of Community	No.	Ave.	No.	Ave.
Farm	4	10	4	17
Town under 500	4	10	2	21
500 to 2500	7	13	5	12
2500 to 10,000	8	15	6	10
10,000 to 100,000	9	11	12	15
Over 100,000	6	17	4	13

TABLE V

A COMPARISON OF MEAN GRADE POINT AVERAGES

	Mean		
Measure	1	2	3
Education 73	2.18	2.31	2.34
Education 74	2.13	2.13	2.02
Education 75	1.90	2.37	2.17
Total Four Year Grade Point Average	1.84	1.93	1.88
Total Four Year G.P.A. of 586 Education Seniors who graduated in 1950	2.02		
Total Four Year G.P.A. of 4577 all University graduating seniors	1.88		

Key

1. Subjects of this investigation
2. Study by Montross
3. Study by Lins

TABLE VI

MEAN GRADE POINT FOR THE SAMPLE IN COMPARISON WITH THE SUBJECTS OF THIS INVESTIGATION

Measure	Mean 1	Mean 2
Education 73	2.06	2.18
Education 74	2.33	2.13
Education 75	2.06	1.90
Total Four Year Grade Point Average	1.98	1.84
Total Four Year G.P.A. of 586 Education Seniors who graduated in 1950	2.02	
Total Four Year G.P.A. of 4577 all University Graduating Seniors	1.88	

Key

1. Fifteen subjects of the sample
2. All subjects of the investigation

TABLE VII

ORIGINAL SCALE AND WEIGHTING SCALE

1	+2	extremely satisfactory, highly agreeable
2	+1	mild satisfaction or agreeable
3	0	neutral, not affecting liking or disliking
4	-1	mildly unsatisfactory, disagreeable
5	-2	extremely unsatisfactory, highly disagreeable

from a follow-up study of sixty-five 1950 graduates of the School of Education at the University of Wisconsin in their first year of teaching. The Teacher Situation Inventory (Appendix A-1) was sent by mail to each member of this group during the last month of the first year of his teaching experience. A letter inviting continued cooperation was sent with the inventory (Appendix A-2). Two follow-up letters were sent subsequently to those who were tardy in returning the inventory (Appendix A-3 and A-4). Forty-nine returned a filled-out inventory. Of those returned, four were not usable because of the omissions and inadequacy of write-in replies as to why they expressed a degree of satisfaction or dissatisfaction.

C. The Criteria of Teaching Success

The criteria used in this investigation were as follows:

1. Acceptability Rating
   This is a rating used in an investigation by Lamke[1] and Ringness[2]. It was obtained by interviewing the principal or superintendent. After rapport had been established the following questions were asked to obtain his overall rating of the teacher:
   a. How do you like this teacher?
   b. Does she get along well with the students?
   c. Do the parents feel the same way as the pupils do about the teacher?
   d. Is the teacher happy here? Does she have friends on the faculty, in the community, and the like?
   e. Does the teacher have any particular weaknesses or strengths?
   f. In terms of beginning teachers with whom you have worked in the past, and in the light of our discussion as a whole, would you consider this teacher as among the best, above average, average, below average, or failing as a teacher?

   The above subjective rating thus obtained from a supervisory or administrative official was defined by Ringness[3] as, "...that quality of the teacher which leads other people to feel that she should be retained in position or possibly be promoted to more responsible assignments."

2. A short form of the Wisconsin Adaptation of the M-Blank (Appendix A-5) was used to obtain the principals' or superintendents' estimate of the teachers' performance. The Adaptation, which was the work of Barr and others is a modification of the M-Blank of the Evaluative Criteria. This Blank in this study included:
   a. Elements of Strength in the Teacher's Work
   b. Elements of Weakness in the Teacher's Work
   c. General Evaluation: Outstanding, Above Average, Average, Below Average, Poor
   d. General Comment

3. A peer rating scale (Appendix A-6) was sent to a co-worker who was acquainted with the particular subjects' work. It contained the following:
   a. How do you rate this teacher on cooperation with you in school enterprises?
   b. Do you find this teacher pleasant and agreeable?
   c. How do you rate this teacher on social intelligence?
   d. What is your opinion concerning this teacher's physical vitality and health?
   e. What is your opinion concerning this teacher with respect to industry and dependability?
   f. To what extent does this teacher participate in community affairs?
   g. How well does this teacher know his subject matter fields?
   h. How do you classify his relationships with the student body?
   i. You are asked to make an overall evaluation of this teacher. If you were to rank all teachers of similar positions, in which fifth would you place this teacher?

4. The judgment of a supervisory official of the State Department of Public Instruction and designated as criterion (X_1).

These criteria were used singly and as a composite of the four measures. In addition, where the subjects of this investigation overlapped with those of Montross (7), his "Number One" composite criterion was used. This "Number One" composite included the Principal's Acceptability

1. Tom Arthur Lamke. Personality and Teaching Success, unpublished manuscript, University of Wisconsin, Madison, Wisconsin, 1951.
2. Thomas A. Ringness. Relationships Between Certain Attitudes Towards Teaching and Teaching Success, Unpublished Ph.D. Dissertation, University of Wisconsin, 1951.
3. Ibid., p. 9.

rating, the Principal's M-Blank rating, Rater 1 and Rater 2.

The effectiveness of each teacher was measured through the use of these instruments as guides to the judgment of the rater.

D. Treatment of the Data

The data are tabulated and the mean frequency of the response to each item tabulated. The mean scores designating satisfaction and dissatisfaction were correlated with efficiency scores on the above named criteria. Selected items of the Inventory, that show low dissatisfaction and high satisfaction scores with a summary of responses given by the subjects of this investigation for such items, are reported.

SECTION III

ANALYSIS OF DATA

THE PURPOSE of this study is to ascertain the relation of certain environmental factors to teaching success as measured by the efficiency scores in this investigation.

The primary sources of data were the teaching efficiency ratings assigned by experts and the responses of the teachers to the Teacher Situation Inventory. Respondees checked each item of the Inventory using a +2, +1, 0, -1, and -2 scale to indicate degrees of satisfaction and dissatisfaction. This scale was retained in computing totals, also the plus, minus and neutral responses were assigned values from 1 to 5 as shown in Table VII. Using the weighted scores facilitated the handling of grouped data; retaining the algebraic scores facilitated rapid identification of items to which respondees indicated dissatisfaction and identification of individual teachers who indicated dissatisfaction.

The response to each item of the inventory by each respondent was recorded as shown in Appendix B-1. The responses of each individual were entered in a working chart of which Table VIII is an example. In this table the responses to items in the nine categories of the inventory are listed. Both methods for scoring items were employed to arrive at a total weighted score for each category. A mean weighted score for each category, a total algebraic score for each category, a total weighted score for all categories, a mean weighted score for all categories, and a total algebraic score for all categories was calculated.

The total mean weighted score for all categories, the mean weighted score for each category, and the algebraic score for each category of each respondee were entered into a summary table (Table IX).

The summarized inventory information was then transferred to a final master chart, Table X. In this table is recorded each respondee number, sex, four teaching efficiency ratings, a peer rating, a composite of three efficiency ratings and a peer rating. Finally, the satisfaction-dissatisfaction scores were converted into percents. The percent satisfaction-dissatisfaction score was obtained by subtracting 3.00 from the mean score and dividing by 2 when the mean score exceeded 3.00, and by subtracting the mean score from 3.00 and dividing by 2 when the mean score was less than 3.00.

It should be noted in the method of scoring explained above that the teachers may respond negatively, positively, or neutrally to any given item. If the teacher responded favorably he was given a plus score; if he responded negatively he was given a negative score. If he responded neutrally he was given a zero score. It should be further noted that each teacher may respond either positively or negatively in two degrees of intensity, namely, minus 1 or minus 2, negatively, and plus 1 or plus 2, positively. When one adds such a series of scores the final sum will have a plus or minus sign which represents a mixture of frequency and intensity, i.e., a teacher may get a negative score by responding negatively to a large number of items mildly (-1) or to a lesser number of items strongly (-2). The same explanation applies to the positive responses.

When we speak of a percent of satisfaction or dissatisfaction we are speaking of an abstract value derived by dividing by 2 the theoretical mean for all items (3.00) minus the particular teachers' mean upon the particular items concerned.

One hundred percent satisfaction means maximum satisfaction with all items. All departures from neutrality are expressed by a fraction, the numerator of which is the deviation of each individual's score from 3.00 over a denominator of 2. This fraction is used to represent the maximum possible deviation. A plus score of 2 represents complete satisfaction to any given item and will be represented by the fraction 2/2 or one hundred percent. The satisfaction of an individual with a plus score of 1, will be represented by the fraction 1/2 or fifty percent.

The reader should further note that each individual's total response is here represented by an average which is secured by dividing the sum of the scores by the number of responses. If the average is numerically less than 3 it is interpreted as a satisfaction score. If it is more than 3, it is treated as a negative score, and the percentages are interpreted accordingly. Possibly attention again should be called to the fact that a small plus or minus score may arise from strong feeling about a relatively few items. The balance may be changed from plus to minus or minus to plus by a few of these items when the

TABLE VIII

RAW SCORES OBTAINED FROM INVENTORY (WORK SHEET)

Weighted Value	Algebraic Value	I No. of items related to community			II No. of items related to people of community			III No. of items related to school plant			IV No. of items related to administration			V No. of items related to school organization			VI No. of items related to instructional materials			VII No. of items related to faculty			VIII No. of items related to students			IX No. of items related to particular position				
			(a)*	(b)**		(a)	(b)		(a)	(b)		(a)	(b)		(a)	(b)		(a)	(b)		(a)	(b)		(a)	(b)		(a)	(b)		
1	+2	10	10	20	2	2	4	1	1	2	4	4	8	8	8	16	4	4	8	15	15	30	4	4	8	6	6	12		
2	+1	14	28	14	0	0	0	8	16	8	12	24	12	10	20	10	9	18	9	16	32	16	15	30	15	15	30	15		
3	0	24	72	0	10	30	0	1	3	0	1	3	0	0	0	0	4	12	0	5	15	0	1	3	0	6	18	0		
4	-1	7	28	- 7	8	32	- 8	15	60-15		1	4	- 1	21	84	-21	8	32	- 8	3	12	- 3	4	16	- 4	8	32	- 8		
5	-2	15	75	-30	1	5	- 2	7	35	-14	0	0	- 0	0	0	0	0	0	0	6	30	12	0	0	0	1	5	- 2		
Total items responded to:		70			21			32			18			39			25			45			24			36			310	
Total weighted score			213			69			115			35			112			66			104			53			91			656	
Total original score				- 3			- 6			-19			19			5			9			31			19			17		-72
Mean			3.04			3.29			3.59			1.94			2.87			2.64			2.31			2.21			2.53			2.77

* (a) Weighted scores
**(b) Algebraic scores

TABLE IX

MEAN WEIGHTED AND ALGEBRAIC SCORES OBTAINED FROM RESPECTIVE CATEGORIES OF THE TEACHER SITUATION INVENTORY

Subject Number	I The Community		II People of Community		III School Plant		IV Administration		V School Organization		VI Instructional Materials		VII Faculty		VIII Students		IX Particular Position		Mean Total Percent
	(a)**	(b)***	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	
1	3.04	- 3*	3.29	- 6	3.59	-19	1.94	+19	2.87	+ 5	2.64	+ 9	2.31	+31	2.21	+19	2.53	+17	2.77
2	2.09	+63	3.33	- 7	1.88	+36	1.78	+22	1.84	43	2.32	18	1.73	57	2.46	13	2.26	47	2.11
3	1.70	73	3.14	- 3	3.92	-25	1.33	15	2.63	10	2.65	7	2.57	9	4.33	- 4	2.52	11	2.55
4	1.44	76	1.46	14	1.34	53	1.50	24	1.90	43	1.60	35	1.87	36	1.00	33	2.61	14	1.67
5	2.50	35	3.05	- 1	2.78	7	2.11	16	2.62	12	2.62	10	2.27	33	3.00	0	2.06	29	2.53
6	1.84	77	2.48	11	2.63	12	1.00	36	1.15	72	1.00	50	1.67	60	2.92	2	1.58	51	1.79
7	3.16	-11	3.24	- 5	3.53	-17	3.33	- 6	3.26	-10	3.23	- 6	3.22	-10	3.38	- 9	3.26	-10	3.27
8	3.00	0	3.19	- 4	3.25	- 8	2.50	9	2.77	9	2.40	15	2.69	14	2.83	4	1.89	40	2.74
9	1.77	86	1.71	27	2.23	23	2.00	18	2.90	4	2.48	13	2.13	39	1.71	31	1.42	49	2.04
10	2.61	18	2.86	3	2.66	11	1.61	25	2.05	31	2.72	7	1.80	54	3.04	- 1	2.50	12	2.41
11	2.71	20	3.35	- 7	2.75	4	2.47	9	3.03	- 1	3.88	-22	3.77	-17	3.67	-14	3.36	-10	3.15
12	2.16	58	3.05	- 1	2.78	7	1.67	24	2.46	21	1.96	26	1.96	46	2.92	2	1.67	48	2.25
13	1.72	88	2.90	2	1.50	48	1.44	28	1.33	65	1.16	46	1.43	69	1.18	40	1.18	62	1.53
14	1.97	72	1.76	26	2.16	27	1.00	36	1.44	61	1.52	37	1.49	68	1.57	33	1.71	44	1.68
15	3.24	-17	3.19	- 4	3.90	-29	3.89	-16	3.54	-17	4.32	-33	2.58	19	4.08	-26	3.08	- 3	3.42
16	3.01	- 1	3.00	0	2.32	21	2.17	15	2.59	16	3.56	-14	3.04	- 2	3.25	- 6	2.56	16	2.85
17	2.78	15	3.10	- 2	3.94	-30	3.56	- 9	3.08	- 3	3.44	-11	2.18	36	3.13	- 3	3.28	-10	3.06
18	2.36	44	2.90	2	3.75	-24	2.67	6	3.67	-26	2.96	1	2.71	13	3.33	- 8	2.69	11	2.94
19	3.09	- 6	3.38	- 8	2.56	14	3.38	- 6	3.00	0	2.65	9	2.96	2	3.29	- 7	2.58	15	2.96
20	2.32	44	2.24	16	1.53	47	1.83	21	1.90	43	2.00	24	2.20	33	2.08	22	1.94	36	1.96
21	2.03	67	1.62	29	1.06	62	1.00	36	1.21	70	1.09	44	1.36	74	1.83	27	1.36	59	1.47
22	2.87	9	2.52	10	3.25	- 8	2.50	9	3.23	- 9	3.23	- 6	3.00	0	2.96	1	3.08	- 3	2.99
23	2.32	42	2.43	12	1.31	54	1.35	28	1.82	46	1.78	28	1.80	53	2.28	13	1.97	34	1.94
24	3.21	-15	3.1	- 2	2.34	21	2.78	4	2.72	11	2.96	1	3.04	- 2	2.92	2	2.94	2	2.93
25	2.67	23	2.57	9	3.90	- 9	2.33	10	2.74	10	2.62	10	1.78	45	1.64	30	1.92	39	2.39
26	3.51	-36	3.29	- 6	3.41	-13	2.75	3	3.28	-11	2.48	13	3.02	- 1	3.13	- 3	3.00	0	3.18
27	1.97	72	1.43	33	2.16	27	1.50	27	1.87	44	1.65	35	1.67	60	2.25	18	1.67	48	1.83
28	2.17	58	2.24	16	2.06	30	1.67	24	1.92	42	1.31	44	1.52	65	2.83	4	1.81	43	1.95
29	3.03	- 2	2.81	4	2.19	26	2.71	5	2.43	21	2.96	1	2.00	44	2.25	18	2.78	8	2.59
30	2.41	37	2.05	20	2.75	8	2.56	8	2.54	18	2.79	5	2.36	29	3.21	- 5	3.02	- 1	2.61
31	2.74	18	2.71	6	1.91	35	1.78	22	2.44	22	2.88	3	2.15	34	3.17	- 4	1.97	29	2.43
32	1.87	76	2.16	16	1.22	57	1.44	28	1.28	67	1.17	42	1.79	41	1.24	37	1.57	37	1.56
33	2.28	49	2.62	8	1.09	61	1.06	35	1.69	51	1.92	28	2.00	45	1.38	39	1.81	43	1.84
34	2.19	56	1.52	31	2.72	9	2.00	18	1.62	54	1.84	29	1.31	76	1.75	30	1.86	41	1.89
35	2.83	12	2.95	1	1.94	34	1.94	19	2.44	22	2.96	1	2.49	23	3.25	-14	269	11	2.62
36	1.59	97	1.90	23	1.97	43	1.11	34	3.08	- 3	2.28	18	2.49	23	2.75	6	2.76	8	2.23
37	2.43	33	3.10	- 2	2.91	3	2.17	15	2.77	9	2.68	8	2.55	20	3.13	- 3	2.86	5	2.70
38	2.03	66	2.00	21	2.00	26	3.00	0	2.67	12	3.50	-13	3.27	- 9	2.75	4	2.63	2	2.55
39	2.10	63	2.95	1	2.78	7	1.44	28	1.97	40	2.05	20	1.73	57	2.75	6	1.29	48	2.09
40	2.52	33	2.29	15	1.88	36	2.22	14	2.15	33	2.24	19	2.29	32	2.21	19	2.42	21	2.28
41	1.73	89	2.05	20	2.03	31	2.56	8	2.79	8	2.96	1	2.75	11	2.75	6	2.58	15	2.39
42	2.39	42	2.90	2	2.53	15	2.00	18	2.31	27	3.24	- 6	2.39	25	2.71	7	2.52	14	2.52
43	2.88	8	2.90	2	3.88	-25	1.44	28	1.97	30	2.48	13	1.62	62	2.54	11	2.44	20	2.50
44	1.56	101	2.09	21	3.09	- 3	1.83	21	2.56	17	2.50	13	2.11	49	2.29	17	2.47	19	2.21
45	2.09	64	2.38	12	2.53	15	1.44	28	1.46	60	2.20	20	1.93	48	2.71	7	1.47	55	2.00

* Minus signs indicate negative responses.
** Weighted Mean Score 1 - 5
***Weighted Algebraic Score

TABLE X

MASTER CHART

Subject Number	Sex	Mentross' Composite Rating	Principal Acceptability	M-Blank	Criterion (X_1)	Peer Rating	Composite (X_0)	Community		People of Community		School Plant		Administration		School Organization		Instructional Materials		Faculty		Students		Particular Position		Mean Total	Total Mean Percent	Subject Number
		X_4	X_3	X_2	X_1		X_0	x_1	Y_1	Y_2	Y_2	Y_3	Y_3	Y_4	Y_4	Y_5	Y_5	Y_6	Y_6	Y_7	Y_7	Y_8	Y_8	Y_9	Y_9	Y_0		
1	F	4.66	5	4	-	-	4.50	3.04	- 2.0	3.29	-14.5	3.99	-29.5	1.94	53.0	2.78	11.0	2.64	18.0	2.31	34.5	2.21	39.5	2.33	23.5	2.77	11.5	1
2	M	-----	3	2	5	5	3.75	2.09	35.5	3.33	-16.5	1.88	56.0	1.78	61.0	1.84	58.0	2.32	34.0	1.73	63.5	2.46	27.0	2.26	37.0	2.11	44.5	2
3	M	3.00	2	3	1	-	2.00	1.70	65.0	3.14	- 7.0	3.92	-46.0	1.33	83.5	2.63	18.5	2.65	17.5	2.57	21.5	4.33	-33.5	2.52	24.0	2.55	22.5	3
4	M	-----	2	1	1	5	2.25	1.44	78.0	1.48	76.0	1.34	83.0	1.50	75.0	1.90	55.0	1.80	70.0	1.67	56.5	1.00	100.0	2.61	19.5	1.67	66.5	4
5	M	1.00	1	1	1	-	1.00	2.50	25.0	3.05	- 2.5	2.78	11.0	2.11	94.5	2.62	19.0	2.62	19.0	2.27	36.5	3.00	0.0	2.06	47.0	2.53	23.5	5
6	M	2.00	2	2	2	2	2.00	1.84	58.0	2.48	26.0	2.63	18.5	1.00	100.0	1.15	92.5	1.00	100.0	1.67	66.5	2.92	4.0	1.58	71.0	1.79	60.5	6
7	M	-----	3	3	5	3	3.50	3.16	- 8.0	3.34	-12.0	3.53	-26.5	3.33	-16.5	3.26	-13.0	3.23	-11.5	3.22	-11.0	3.38	-19.0	3.28	-14.0	3.27	-13.5	7
8	F	-----	2	1	2	6	2.75	3.00	0.0	3.19	- 9.5	3.25	-12.5	2.90	25.0	2.77	11.5	2.40	30.0	2.69	15.5	2.63	8.5	1.89	55.5	2.74	13.0	8
9	M	2.25	2	2	-	-	2.00	1.77	61.5	1.71	64.5	2.23	38.5	2.00	50.0	2.90	5.0	2.48	26.0	2.13	43.5	1.71	64.5	1.42	78.0	2.04	48.0	9
10	F	3.50	4	2	6	-	4.67	2.61	19.5	2.86	7.0	2.66	17.0	1.61	69.5	2.05	47.5	2.72	14.0	1.80	60.0	3.04	- 2.0	2.50	25.0	2.41	29.5	10
11	M	-----	1	2	-	-	1.50	2.71	14.5	3.35	-17.5	2.75	12.5	2.47	26.5	3.03	- 1.5	3.86	-44.0	3.77	-36.5	3.67	-33.5	3.36	-18.0	3.15	- 7.5	11
12	F	1.75	2	2	-	-	2.00	2.16	42.0	3.05	- 2.5	2.78	11.0	1.67	66.5	2.46	27.0	1.96	52.0	1.98	51.0	2.92	4.0	1.67	66.5	2.25	37.5	12
13	M	-----	3	2	1	2	2.00	1.72	64.0	2.90	5.0	1.58	75.0	1.44	78.0	1.33	83.5	1.16	92.0	1.43	78.5	1.18	91.0	1.18	91.0	1.53	73.5	13
14	M	-----	2	3	4	3	3.00	1.97	51.5	1.76	62.0	2.16	42.0	1.00	100.0	1.44	78.5	1.52	74.0	1.49	75.5	1.57	71.5	1.71	64.5	1.68	64.0	14
15	M	3.25	3	3	4	2	3.00	3.24	-12.0	3.19	- 9.5	3.90	-45.0	3.89	-44.5	3.54	-27.0	4.32	-66.0	3.58	21.0	4.08	-54.0	3.08	- 4.0	3.42	-21.0	15
16	F	2.00	2	2	3	3	2.50	3.01	- 0.5	3.00	0.0	2.32	34.0	2.17	41.5	2.59	20.5	3.56	-28.0	3.04	- 2.0	3.25	-12.5	2.58	22.0	2.85	7.5	16
17	F	-----	1	2	1	3	1.75	2.78	11.0	3.10	- 5.0	3.94	-47.0	3.56	-28.0	3.08	- 4.0	3.44	-22.0	2.18	41.0	3.13	- 6.5	3.28	-14.0	3.06	- 3.0	17
18	F	2.75	3	3	3	2	2.75	2.36	32.0	2.90	5.0	3.75	-37.5	2.67	16.5	3.67	-33.5	2.96	2.0	2.71	14.5	3.33	-16.5	2.69	15.5	2.94	3.0	18
19	M	-----	2	2	3	4	2.75	3.09	- 4.5	3.38	-19.0	2.56	22.0	3.38	-19.0	3.00	0.0	2.65	17.5	2.96	2.0	3.29	-14.5	2.58	21.0	2.96	2.0	19
20	M	2.50	2	2	1	5	2.50	2.32	34.0	2.34	38.0	1.53	72.5	1.83	58.5	1.90	55.0	2.00	50.0	2.20	40.0	2.08	48.0	1.94	53.0	1.98	52.0	20
21	F	2.00	2	2	3	6	2.75	2.03	48.5	1.62	69.0	1.06	97.0	1.00	100.0	1.21	89.5	1.09	95.5	1.36	82.0	1.83	58.5	1.38	82.0	1.47	76.5	21
22	M	3.25	3	2	2	3	2.50	2.67	56.5	2.52	24.0	3.25	-12.5	2.50	25.0	3.23	-11.5	3.23	-11.5	3.00	0.0	2.96	2.0	3.08	- 4.0	2.99	.5	22
23	F	2.25	2	3	4	4	3.25	2.32	34.0	2.43	28.5	1.31	84.5	1.35	82.5	1.62	59.0	1.78	61.0	1.80	60.0	2.38	31.0	1.97	51.5	1.94	53.0	23
24	M	-----	2	2	2	2	2.00	3.21	-10.5	3.10	- 5.0	2.34	33.0	2.78	11.0	2.72	14.0	2.96	2.0	3.04	- 2.0	2.92	4.0	2.94	3.0	2.93	3.5	24
25	M	1.75	2	2	4	4	3.00	2.67	16.5	2.57	21.5	3.90	-45.0	2.33	33.5	2.74	13.0	2.62	19.0	1.78	61.0	1.64	68.0	1.92	54.0	2.39	30.5	25
26	M	1.66	1	1	2	4	2.00	3.51	-25.5	3.29	-14.5	3.41	-20.5	2.75	12.5	3.28	-14.0	3.48	26.0	3.02	- 1.0	3.13	- 6.5	3.00	0.0	3.18	- 9.0	26
27	M	----	3	2	3	3	2.50	1.97	51.5	1.43	78.5	2.18	42.0	1.50	75.0	1.87	56.5	1.65	67.5	1.67	66.5	2.25	37.5	1.67	66.5	1.83	58.5	27
28	M	3.00	3	3	4	6	3.50	2.17	41.5	2.24	38.0	2.06	47.0	1.67	66.5	1.92	54.0	1.31	84.5	1.52	74.0	2.83	8.5	1.81	59.5	1.95	52.5	28
29	M	-----	3	3	1	5	2.75	3.03	- 1.5	2.81	10.5	2.19	40.5	2.71	14.5	2.43	28.5	2.96	2.0	2.00	50.0	2.25	37.5	2.78	11.0	2.59	20.5	29
30	F	-----	2	3	6	5	4.00	2.41	29.5	2.05	47.5	2.75	12.5	2.56	22.0	2.54	23.0	2.79	10.5	2.36	32.0	3.21	-10.5	3.03	- 1.5	2.61	19.5	30
31	M	2.00	1	1	1	2	1.25	2.74	13.0	2.71	14.5	1.91	545	1.78	61.0	2.44	28.0	2.88	6.0	2.15	42.5	3.17	- 8.5	1.97	51.3	2.43	28.5	31
32	F	3.00	3	2	4	3	3.00	1.87	56.5	2.16	42.0	1.22	89.0	1.44	78.0	1.28	86.0	1.17	91.5	1.79	60.5	1.24	88.0	1.57	71.5	1.56	72.0	32
33	M	-----	2	3	-	-	2.50	2.28	36.0	2.62	19.0	1.09	95.5	1.06	97.0	1.69	65.5	1.92	54.0	2.00	50.0	1.38	81.0	1.81	50.0	1.84	58.0	33
34	F	-----	2	2	2	5	2.75	2.19	40.5	1.52	74.0	2.72	14.0	2.00	50.0	1.62	69.0	1.84	58.0	1.31	84.5	1.75	62.5	1.86	57.0	1.89	55.5	34
35	F	-----	3	2	1	2	2.00	2.63	8.5	2.95	2.5	1.94	53.0	1.94	53.0	2.44	28.0	2.96	2.0	2.49	25.5	3.25	-12.5	2.69	16.5	2.62	19.0	35
36	F	-----	3	3	2	5	3.25	1.59	70.5	1.90	55.0	1.97	51.5	1.11	94.5	3.08	- 4.0	2.28	36.0	2.49	25.5	2.75	12.5	2.78	11.0	2.23	38.5	36
37	F	-----	2	3	5	6	4.00	2.43	28.5	3.10	- 5.0	2.91	4.5	2.17	41.5	2.77	11.5	2.68	16.0	2.55	22.5	3.13	- 6.5	2.88	7.0	2.70	15.0	37
38	F	3.75	4	3	-	-	3.50	2.03	48.5	2.00	50.0	2.00	50.0	3.00	0.0	2.67	16.5	3.50	-25.0	3.27	-13.5	2.75	12.5	2.83	8.5	2.55	22.5	38
39	F	-----	3	2	-	-	2.50	3.10	45.0	2.95	2.5	2.78	11.0	1.44	78.0	1.97	51.5	2.05	47.5	1.73	63.5	2.75	12.5	1.29	85.5	2.09	45.5	39
40	F	-----	2	2	-	-	2.00	2.52	24.0	2.29	35.5	1.88	56.0	2.22	39.0	2.15	42.5	2.24	38.0	2.29	35.5	2.21	39.5	2.42	29.0	2.28	36.0	40
41	F	1.33	1	3	1	-	1.67	1.73	63.5	2.05	47.5	2.03	48.5	2.56	22.0	2.79	10.5	2.96	2.0	2.75	12.5	2.75	12.5	2.58	21.0	2.39	30.5	41
42	F	2.50	2	2	5	4	3.25	2.39	30.5	2.90	5.0	2.53	23.5	2.00	50.0	2.31	34.5	3.24	-12.0	2.39	30.5	2.71	14.0	2.52	24.0	2.52	24.0	42
43	F	-----	2	2	-	-	2.00	2.88	6.5	2.90	5.0	3.88	-44.0	1.44	78.0	1.97	51.5	2.48	26.0	1.62	69.0	2.54	23.0	2.44	28.0	2.50	25.0	43
44	M	2.00	2	2	1	3	2.00	1.56	72.0	2.00	50.0	3.09	- 4.5	1.83	58.5	2.56	22.0	2.50	25.0	2.11	44.5	2.29	35.5	2.47	26.5	2.21	39.5	44
45	F	1.00	1	1	1	3	1.50	2.09	45.5	2.38	31.0	2.53	26.5	1.44	78.0	1.46	77.0	2.20	40.0	1.93	53.5	2.71	14.5	1.47	76.5	2.00	50.0	45
Mean								2.39		2.40		2.60		2.53		2.04		2.38		2.46		2.24		2.63		2.31		
Percent									30.5		30.0		20.0		23.5		48.0		31.0		27.0		38.0		18.5		34.5	

individual's score is not already too heavily weighted one way or the other.

The teachers responded with variable degrees of satisfaction-dissatisfaction to their situations in general as indicated in Table X. The means of the teachers' responses to the total situation Column (Y_O), indicates that five teachers, numbers 7, 11, 15, 17, and 26 were more dissatisfied than satisfied with their situations. The aspects of the situation with which all members of this group showed more dissatisfaction than satisfaction included the students, the people of the community, and the school organization. One teacher indicated dissatisfaction with all nine aspects; the one showing least dissatisfaction was dissatisfied with six of the nine aspects.

Sixteen of the respondees indicated satisfaction with each of the nine aspects of the situation, while 24 who indicated satisfaction recorded dissatisfaction with one or more of the nine aspects of their situations.

As one examines these data it appears that teachers feel more satisfied with some aspects of the situations than others, and some teachers are more generally satisfied than others with the situation.

The means of the responses to the nine categories indicate that on the average more teachers were satisfied than dissatisfied with all nine categories. The rank order in which the teachers indicated most satisfaction with aspects of the situation are as follows: (1) administrative personnel and procedures, (2) faculty, (3) the particular position in which the teacher is, (4) the school organization, (5) the community in general, (6) instructional materials, (7) school plant, (8) the people of the community, and (9) the students. They were least satisfied with students.

A summary of each of the above nine categories follows. When percents are spoken of they were calculated by the process already indicated above.

1. The Administration

The analysis of the teachers' responses to individual items of the Inventory related to the administration (Table XI), shows that the teachers as a group indicated more dissatisfaction than satisfaction with no aspect of administration. Those items which were satisfactory to 50 percent of the teachers or more include the standing of the Board of Education in the community, the age, training, experience and philosophy of the superintendent. All other items ranged from 28 to 50 percent in satisfaction.

2. The Faculty

The analysis of the teachers' responses to the individual items of the Inventory related to the faculty of the school (Table XI) having a relatively high degree of satisfaction were the average age of the faculty, the number of Wisconsin Education Association memberships, and the availability of group insurance. A lower degree of satisfaction was registered for the person performing, the method used in performing, and the purpose and basis used in the evaluation of the work of the faculty. These scores in the aforenamed items ranged from 2 to 40 percent. In the same range of satisfaction were the number of faculty assistants available, and the type and competence of the help provided. Actual dissatisfaction was registered with regard to the adequacy of the professional library and the number of articles published by the members of the faculty.

3. The Particular Position

The analysis of the teachers' responses to individual items of the Inventory related to the particular position (Table XI), indicate a high degree of satisfaction with the degree of independence allowed and frequency of payment of salary these being given 82 and 74 percent satisfaction scores respectively. A general lower degree of satisfaction was registered for such aspects of the position as the size of the classes and the number of activities and the appropriateness of training to handle extra curricular activities. There was no item for which the number of teachers dissatisfied with the situation exceeded the number satisfied.

4. The School Organization

The analysis of the teachers' responses to individual items of the inventory related to the school organization (Table XI) shows that a high degree of satisfaction, ranging from 50 to 85 percent, was indicated for the hour of opening and closing school, length of class periods and the noon hour, and the vacation periods allowed. Within this range, the type of grading system used received the highest degree of satisfaction of all of the items on school organization. The importance of the grading system to the pupils, the aids available to teachers for the guidance of students, the value of participating in teacher meetings, and the adequacy of the school library in all areas received the lowest degrees of satisfaction, ranging from 1 to 5 percent. Other items of the Inventory in relation to the school organization that the teachers rated low in satisfaction were the rigid use of a fixed marking system, narrowness and inadequacy of course offerings to meet the student's needs, and the type and amount of guidance provided. Still others in this same category were the frequency, method of planning and the value of school assemblies. Low degrees of

TABLE XI

SELECTED ITEMS FROM THE TEACHER SITUATION INVENTORY INDICATING THE PERCENT AND REASONS FOR SATISFACTION-DISSATISFACTION

Percent	
	SECTION I: THE COMMUNITY
	1. COMMUNITY LOCATION
	The State it is in:
83.5	Prefer to teach in home state. Like to live in warmer climate.
	Section of the State it is in:
46.5	Like to be near large city. Prefer to be in Southern part of State.
	2. SIZE OF COMMUNITY
	The Population
36.5	Prefer to live in larger cities.
	3. COMMUNITY ACCESSIBILITY
	Adequacy, Condition of Highways
53.5	Good roads were generally available. Some need of road and street repair.
	Convenience of Bus Schedules
- 1.0	Poor bus schedules.
	Convenience of Train Schedules
-26.5	No convenient train schedules.
	4. ADJACENCY OF COMMUNITY
	Nearness to Shopping Centers
49.0	Near good shopping centers.
	5. GEOGRAPHY OF THE COMMUNITY
	Its Topography
39.0	Like the lakes, woods and hills.
	6. COMMUNITY APPEARANCE
	Its Cleanliness
61.0	Most towns and cities are kept very clean, some need to get funds to make improvements.
	7. INDUSTRIES OF THE COMMUNITY
	Their Contribution to Progress
29.0	Industry helps the cities. Need more interest by all people in community planning.

8. COMMUNITY INSTITUTIONS

The Diversity of Churches
65.5 Adequate to numerous.

Activity of the Churches
58.0 Very active to passive. Should coordinate activities of church with school.

Availability of Your Denomination
63.5 Not always available.

9. COMMUNITY HEALTH SERVICES

Availability of Good Doctors
52.0 Available for the most part, some communities need more doctors.

Availability of Good Dentists
44.5 Adequate to fair.

10. PUBLIC LIBRARY

Its Convenience of Opening Hours
29.0 No library, poor that are available, poor schedule, poor service.

Its Adequacy of Materials
16.5 Materials not adequate.

12. SOCIAL GROUPS, COMMUNITY CLUBS

Their Diversity
36.5 Many and varied; need more social groups for young people.

Their Purposes for Organization
39.0 Have social purposes by and large; need wider aims.

Their Availability to Teachers
39.0 Easily available; teachers can attend but not overly encouraged by the community.

Their Contribution to Community
40.0 Some have purposes; others purely social.

13. LIVING QUARTERS IN COMMUNITY

The Type You Found Available
69.0 Private homes, rooms, apartments.

The Suitability of its Location
81.0 Generally suitably located close to school.

The Modernness of Its Conveniences
75.5 Very modern.

The Restrictions, Regulations Asked
76.0 Few to no restrictions.

The Degree of Privacy Provided
66.0 All that can be desired; some need privacy.

14. MEAL ACCOMMODATIONS

The Convenience of Location

58.5 Good to excellent; walking distance from school.

17. CULTURAL OPPORTUNITIES IN COMMUNITY

Its Stage and Concert Offerings

-23.5 Extreme lack of concerts, plays. Need community interest to back the obtaining of it in the community.

Its Museums, Galleries, Zoos

-45.5 Non-existent.

Its Public Forums and Lectures

-27.5 None to moderate, offered by nearby institutions. Television coming in.

Its Provision for Adult Education

- 1.0 Agriculture, homemaking, vocational schools, more courses should be offered.

18. LEISURE TIME OPPORTUNITIES

Commercial Amusements Available

-19.0 General run of movies, bowling.

19. EXTRA JOB OPPORTUNITIES

Types of Extra Employment Available

-14.0 None to part-time work. More small businesses needed.

21. COMMUNITY DEMANDS ON TEACHERS

Community Responsibilities

35.0 Teacher left comparatively free, people recognize demands, teacher load.

Social Taboos, Bans on Behavior

43.0 Most anything within reason, very liberal.

Expectancies of Residence

30.0 Can leave for weekends, free to come and go.

SECTION II: PEOPLE OF THE COMMUNITY

2. LANGUAGE OF THE PEOPLE

The Quality of Everyday Usage

-32.0 Low level of English spoken generally, poor grammar usage. Need to change attitude of people toward language.

5. PEOPLE'S CULTURE

Their General Educational Level

- 5.5 Educational level is low.

Their Interests in the Arts

-22.0 Very little interest, people not interested in finer things of life. Need clubs, churches that would build this up.

7. CHARACTERISTICS OF THE PEOPLE

Their Hospitality
61.0 Extremely friendly generally; should make new teacher more welcome.

Their Friendliness
60.0 Good, congenial and helpful.

Their Cooperation with the School
29.0 Excellent to take school for granted.

Their Pride in Home and Community
60.0 Takes pride in immediate community; not the wide community.

SECTION III: SCHOOL PLANT

1. SITE OF SCHOOL PLANT

Its Convenience of Location
77.5 Most generally centrally located within walking distance.

Its Adequacy of Playground
25.0 Good to small, traffic hazards, more space generally needed.

Its Appearance of Grounds
49.0 Good generally, playgrounds need repair.

3. HEATING OF THE BUILDING

The Type in Use
50.0 Good, usually warm, well controlled.

4. LIGHTING IN THE BUILDING

The Type in Use
22.0 Mostly direct, single lights.

The Adequacy of Performance
19.5 Excellent to very poor. Halls need light.

The Convenience for Use
50.0 Good, to fair, to lack of proper outlets.

9. FACULTY ROOMS

The Number of Them
-43.5 No faculty room; need some room for faculty privacy. Felt the need of this very strongly.

The Degree of Privacy Afforded
-37.0 No privacy, boiler room only place to take a smoke and relax.

The Regulations for Their Use
-18.0 Not many regulations, can't smoke in some; poor furniture in them.

10. CUSTODIAL SERVICE

Its Adequacy
43.0 Excellent to fairly adequate, lax, uncooperative janitors. Should be more conscientious.

Its Competency

41.0 Very good to very little done, rooms not kept clean, too old men.

Its Cooperativeness with Faculty

44.5 Hold the efficient ones and get rid of the uncooperative ones.

SECTION IV: THE ADMINISTRATION

1. THE BOARD OF EDUCATION

Its Standing in the Community

60.5 Well liked, looked up to, respected, good.

Its Educational Philosophy

46.5 Conservative to progressive to let alone policy. Need people who understand problems.

3. THE SUPERINTENDENT

His Age

76.5 Mature in judgments; 35 to 60 years old.

His Years in Present Position

56.0 From 2 to 25 years.

His Years Training and Degrees

67.5 Sufficient, Masters to Ph. D.'s, mostly Master's degrees.

His Kind and Amount of Experience

74.5 Wide experience, range of 6 to 35 years experience.

His Educational Philosophy

71.0 Conservative to progressive; greater dignity in his actions. Broader philosophy needed.

6. ADMINISTRATIVE POLICIES

Standards for Student Promotion

30.5 No failing policy; level of scholarship should be improved; definite standards for promotion should be set and maintained.

Standards for Student Eligibility

32.5 Poor students passed so they can make the team; WIAA standards.

Teacher Experimentation, Research

36.5 Given considerable leeway; up to individual teacher so long as there is discipline; often encouraged.

Teacher Tenure, Seniority Rights

28.0 Fair to good.

Use of Democratic Procedures

50.0 Administrator makes final decisions; teachers encouraged to make suggestions; student's through council have part in decision making; should make democratic procedure sincere; lack of faculty planning.

SECTION V: SCHOOL ORGANIZATION

1. THE SCHOOL YEAR

The Vacations Allowed

62.5 Christmas and spring.

2. DAILY SESSIONS

The Hour of Opening

54.5 Range of 7:55 A.M. to 8:55 A.M.

The Length of Periods

55.5 Range of 43 to 60 minutes; prefer periods of varied length for different groups.

The Length of Noon Hours

56.0 Range of 30 minutes to 1-1/2 hours.

The Hour of Closing

61.0 Range between 3:30 P.M. to 4:30 P.M. Prefer 3:30 to 3:45.

3. SCHOOL GRADING SYSTEM

The Type Used

Letter grade A, B, E, D, F. More flexibility in grading systems.

The Rigidity of Its Use

25.5 Very rigid.

The Importance it Holds with Pupils

1.0 Pupils do not pay too much attention to it; know they won't fail. Other pupils put too much emphasis on grades.

4. SCHOOL CURRICULUM

The Broadness of Offerings

13.5 Very little to many choices possible. No languages offered. Commercial and shop courses needed.

Its Adequacy for Student Needs

13.5 Course offerings needed to meet the need in Agriculture, Shop, Home Economics.

Its Requirements and Electives

23.5 Not enough electives.

5. SCHOOL EXTRA-CURRICULUM

The Diversity, Variety of Offerings

49.0 Many activities offered such as Music, Speech, Athletics and many others.

The Adequacy for Student Needs

40.0 Does not take care of the needs of all students. Rural students not able to participate.

The Balance Among Activities

33.0 Too much emphasis on sports, Agriculture and Music. Need balance.

6. STUDENT GROUPING IN SCHOOL

The Bases Used to Group

22.5 I.Q. performance; grade level plus much guesswork. Need ability grouping.

The Purposes for Doing It

33.0 To make it easy to locate students; allow good students to progress.

7. STUDENT CONTROL

The Type Used in Whole School

28.5 Student council; purposes of student council not clearly defined. Establish policy on role of student council and furnish good guidance for it.

The Nature of Regulations Imposed

13.0 No set rules. Rules should be made by teachers, pupils and administration.

8. SCHOOL ASSEMBLIES

Their Frequency

16.0 Once or twice a month, not often enough, more planning needed by all concerned.

Their Purpose

28.5 For giving directions, instruction and recreation. Goals should be set with students in mind.

Their Value to the Students

18.0 Some excellent, others a waste of time.

The Responsibility for Organizing

15.0 Principal plans most, students and teachers others. Should be cooperative effort.

9. SCHOOL GUIDANCE OF STUDENTS

The Type and Amount Provided

12.0 Need of guidance director; mostly done by teachers.

The Aids Available to Teachers

1.0 Few to none provided. Need for material such as occupational information.

11. TEACHERS MEETINGS

Their Frequency

33.5 Formal and does not accomplish much. Two meetings a month. Need more well planned meetings.

Their Purpose

18.0 Discuss school problems, that could be taken care of in other ways. Teachers wont express themselves freely.

Their Procedure

18.0 Semi-democratic, more teacher participation needed.

The Value to Participants

3.5 One person gets the floor and keeps it. Those not directly concerned should be excused. Absolutely of no value.

SECTION VI: INSTRUCTIONAL MATERIALS

1. SCHOOL LIBRARY

Its Size and Number of References

19.0 Restricted facilities to very good facilities. Library improvement program should be set up.

Its Adequacy for all Areas

3.5 Limited in some fields, need source books in Literature and Social Sciences.

Its Recency of Books and Materials

14.5 Books are too old. Need fresh materials.

Its Variety and Range of Difficulty

12.5 Should have books for ranges of ability.

Its Suitability of Periodicals

31.0 Excellent to very limited selection. Need a variety in a central place.

2. AUDIO-VISUAL MATERIALS

Their Appropriateness

56.5 Service available, average use is made of it.

Their Condition, Ease of Operation

46.5 Excellent, average, good to never works right.

The Regulations for Use

52.0 Not strict, must sign schedule.

The Budget for Materials

30.5 Not enough money to unlimited.

3. TEXT MATERIALS

The Quantity Furnished

43.0 Not sufficient, limited; all new books.

Their Ownership

52.5 Furnished by school.

Their Appropriateness

38.0 Generally out of date and not enough range of difficulty.

Their Condition, Worn, etc.

35.5 Cheap, worn, to good to excellent.

4. CLASSROOM AIDS—LABORATORY

The Equipment Furnished

16.0 Could use more. From poor to fair to good and better than average.

Their Adequacy, Number and Size

11.5 From not enough, to average to excellent.

Their Condition

16.0 Poor, to good, to excellent.

5. STANDARDIZED TEST MATERIALS

The Extent of Use

24.5 Testing program in operation; left up to teachers.

The Purposes of Administration

23.5 For classification, diagnosis and placement; no one seems to know.

6. SUPPLEMENTARY MATERIALS

Provision for Field Trips

15.0 School buses available at times; field trips should be used more by teachers.

Provision for Outside Talent

15.0 Some through University of Wisconsin. Provision should be made for at least limited program.

SECTION VII: THE FACULTY

1. STRUCTURE OF FACULTY

Total Number of Individuals

44.5 Range of 5 to 62.

The Average Age

66.0 35 years; would prefer younger people to work with.

Their Age Range

58.0 Range of 21 to 60.

The Sex Distribution

42.0 50 - 50 to too many women.

Their Marital Status

29.5 Most men married, women single. Either more single men or none.

4. RESIDENCE OF FACULTY

The Percent Living Out of Town

59.5 20 to 25% live out of town. Should live in town and as part of community.

The Percent of Home Teachers

30.0 From none to 85%.

6. FACULTY PROFESSIONAL STATUS

The Number of WEA Memberships

64.5 Twenty-five teachers reported 100% in WEA.

The Number of Union Memberships

1.0 None.

The Number of Earned Recognitions

61.0 None to few, if any.

The Number Having Articles Published

- 6.0 None, few, 2 or 3.

7. ASSISTANTS TO FACULTY

The Number Available

2.5 None to one who is overworked. Need more faculty help. Have a time when faculty could call on help.

The Type of Help Provided
10.0 Student help.

The Competence of the Help
12.5 Poor to very competent, very willing to help.

8. SERVICES TO FACULTY

Availability of Group Insurance
64.5 Largely Blue Cross.

Provisions for Sick Leave
65.5 Average 5 days.

Rules on Emergency Leave
56.5 Very reasonable and liberal and understanding.

Adequacy of Professional Library
- 1.0 From good, adequate to very poor. Need material which relates to school problems.

9. SELECTION OF FACULTY

The Method Used
53.5 Personal interview with superintendent.

The Bases for Choice
52.5 Qualifications, personality and recommendations.

10. EVALUATION OF WORK OF FACULTY

The Method of Evaluation Used
17.5 None that is known; principal visits classroom; informal; not informed how teachers were evaluated.

The Purpose for It
33.0 Merit system; improve quality of faculty; promotion and raises.

The Bases Used in Evaluating
18.5 Educational theory; experience, or impressions of principal. Prefer teacher would be informed of basis of evaluation. Valuations could be more specific to help the teacher.

The Person Doing It
36.5 Curricular worker, principal, superintendent, supervisor.

SECTION VIII: THE STUDENTS

1. STUDENT ENROLLMENT

The Total Number
45.5 85 to 1600.

The Majority Sex
30.5 About equal.

The Teacher-Pupil Ratio
32.5 One teacher to 25 to 35 pupils. Prefer smaller groups of 20 to 25.

2. STUDENT RESIDENCES

The Distance from School

-10.0 Some come as far as 40 miles, too long bus ride. Bus routes are too long.

The Condition of the Homes

13.0 Poor, good, very comfortable.

3. STUDENT PERFORMANCE

The Persistency of Attendance

- 4.5 Too many absences, need close check. Classes should be made more interesting so students would be eager to attend.

The Level of Scholarship

-10.0 Generally low, few real students, no apparent ambition, little self direction. Great need for conscientious study.

4. STUDENTS' TRAITS

Their Behavior, Manners

12.5 Well mannered to rude, uncouth. Students show lack of home training. Parents should teach children manners.

5. STUDENT ATTITUDES

Those Toward Fellow Students

45.5 Generally good to too many cliques. Little concern for other students' feelings. Could be improved with right leadership.

Those Toward Learning

-15.0 No desire to learn, attend because they have to. Teacher must motivate to arouse desire for learning.

Those Toward Faculty

22.5 Good, to more respect needed, teacher can't let down for a minute.

6. STUDENT CONTRIBUTIONS

Percent Going to College

8.0 5 percent to 30 percent. Need to stress importance of education.

SECTION IX: THE PARTICULAR POSITION

1. YOUR TEACHING LOAD

The Appropriateness to Your Training

54.5 Good, very good, excellent.

The Number of Classes

43.0 Average 5 per day.

The Size of the Classes

14.0 Most generally too large, range 14 to 40, prefer 20 to 25.

2. YOUR EXTRA-CURRICULAR LOAD

The Number of Activities

22.0 Average of two. Some teachers carry too heavy a load in this area.

The Appropriateness to Your Training

28.0 Wide training should be required to handle various activities. Prefer student council training, pep club.

3. YOUR ADMINISTRATIVE LOAD

Amount of Home Room Responsibilities

26.5 Home room, detention hour. Need to be organized and planned.

Number of Noon-After School Duties

32.0 Noon duty, supervise school social functions, playground. Such work is distributed among teachers. Would prefer to have it distributed fairly.

The Number of Records and Reports

39.5 Just grades, 4 to 5 reports of various kinds a month.

The Times Lesson Plans are Required

49.0 None, checked every week, recommended by supervisor. Prefer not to have to submit them in too much detail.

The Degree of Independence Allowed

82.0 Very much on your own.

4. YOUR INSTRUCTIONAL MATERIALS

The Appropriateness of Other Aids

25.0 Should be more suitable; more maps, references and periodicals needed. Less difficult material needed for students of less ability.

5. YOUR COMMUNITY DUTIES

Their Nature

26.0 None. Entirely voluntary, exhibits, talks P. T. A.

6. YOUR SALARY

The Amount

24.0 Generally ranged from $2400 to $3450. Would prefer from $2600 to $3600.

The Frequency of Payment

74.0 Generally once a month. Choice of 9 to 12 months. Prefer two times per month.

The Bases for Determining

21.0 No basis. Salary schedule. Experience and training. Prefer single schedule.

The Number of Deductions

27.5 Health insurance, retirement, income tax. Prefer less deduction for retirement.

7. YOUR CONTRACT PROVISIONS

Their Exact Nature

39.0 None to very exact. Extra curricular duties not specified. Prefer to have more stated exactly what one must do.

Their Justness

37.0 Generally very fair.

		8. YOUR PROMOTION
		The Form it Would Take, its Nature
15.0		Raise in salary.
		The Basis for Granting
37.5		Experience, competent performance, extra-curricular work. Based too much on discipline.
		The Amount of Salary Increments
27.0		Range of $100 to $325 a year. Prefer set salary schedule so all teachers will know.
		9. FURTHER REQUIREMENTS
		The Teaching Method Desired
13.5		Left up largely to the individual teacher. Principal desires teacher control students. Prefer more supervision. More pupil planning.
		The Student Relations Desired
53.5		Friendly but keep proper professional distance.
		The Type of Discipline Wanted
31.5		Up to the individual teacher. Prefer more administrative backing.
		The Committee Work Involved
31.0		Voluntary basis. Many committees working continually on problems and research.

satisfaction were indicated for such items as the importance of the grading system to the pupils, occupational information available, the guidance of students, and the value of teacher meetings to the participants. There were no items of the school organization that received more dissatisfaction responses than satisfaction responses.

5. The Community

The analysis of the teachers' responses to individual items of the Inventory related to the community (Table XI) indicate some dissatisfaction with convenience of bus and train travel, cultural opportunity, leisure time opportunity, and extra job opportunities. Those aspects of the community toward which the teachers indicated a high degree of satisfaction (75 percent or higher) were the state in which they taught, accessibility of living quarters, moderness of living quarters and the paucity of restrictions in their living quarters.

6. The Instructional Materials

The analysis of the teachers' responses to individual items of the Inventory related to the instructional materials (Table XI) indicated a relatively low degree of satisfactions with the appropriateness of supplementary aids to teachers. They indicated that there was a need for more suitable aids such as maps, charts, references, and periodicals. There was also need for graded material of various reading difficulty so as to meet the needs of all the students more adequately, according to the teachers responding to the inventory.

7. The School Plant

The analysis of the teachers' responses to individual items of the Inventory related to the school plant (Table XI) shows some high degrees of dissatisfaction. Those items which received high dissatisfaction scores (ranging from 18.0 to -43.5 percent) were the lack of a faculty room in which to have some privacy, and the restrictions placed on the use of a faculty room where there was one. The items which received high satisfaction scores were the location of the school plant, the heating of the building, the convenience of light, and the appearance of the playground. Lower satisfaction scores were indicated for the inadequacy of the playground, the type of lighting used, insufficient light for halls and stairways, and the inadequacy, incompetency and uncooperativeness of custodial service. These lower satisfaction scores ranged from 20 to 45 percent.

8. The People of the Community

The analysis of the teachers' responses to the individual items of the Inventory related to the people of the community (Table XI) indicates dissatisfaction with the people of the community with respect to their language usage, educational level, and interest in the arts. The friendliness and hospitality of the people were given 61 percent and 60 percent satisfaction scores, respectively.

9. The Students

The analysis of the teachers' responses to individual items of the Inventory related to the students (Table XI) indicates a generally low degree of satisfaction or a moderately low dissatisfaction with the various aspects relative to students' performance, attendance, level of scholarship, attitude toward learning, and the distance of pupils from school as the latter affects the various aspects of the students' school life. These items had a range of -4.5 to -15.0 percent of dissatisfaction. The low satisfaction scores were indicated in the areas of personal traits and manners of the students, such as behavior and manners, attitudes toward faculty members and fellow students, and the conditions of the homes.

Analysis of the Responses of the Fifteen Most Satisfied and Dissatisfied Subjects

A study was also made of the relation between satisfaction-dissatisfaction scores and teacher efficiency as determined by supervisory ratings. Three criteria of efficiency were employed: (1) an Acceptability rating, (2) an M-Blank rating, and (3) a Composite of Various Measures. The satisfaction-dissatisfaction scores previously reported in Table X, were arranged in rank order (see Appendix B-2, B-3 and B-4 for the raw data). The most dissatisfied teacher, i.e., the teacher with the highest raw score, was given rank order one. This was done separately for each category. The least dissatisfied teacher, i.e., the teacher with the lowest raw score, was ranked forty-fifth. A summary of these scores is given in Tables XII, XIII, and XIV.

From examining the data in Tables XII, XIII, and XIV, it may be noted that no consistent pattern is revealed. The mean scores of the 15 most dissatisfied and the 15 least dissatisfied teachers in relation to the acceptability criterion showed that the 15 most dissatisfied teachers received a more favorable mean efficiency rating. In relation to the Composite (X_0) criterion the fifteen most dissatisfied teachers also received a more favorable mean efficiency rating. In rela-

TABLE XII

THE MEAN VALUE FOR THE 15 MOST DISSATISFIED AND THE 15 LEAST DISSATISFIED TEACHER SCORES CALCULATED FOR THE SEVERAL FACTORS AND THE CRITERION OF ACCEPTABILITY (X_3)

Environmental Factors		15 Most Dissatisfied		15 Least Dissatisfied	
		Mean Score	Acceptability Criterion	Mean Score	Acceptability Criterion
I.	Community	3.10*	2.20	1.83	2.27
II.	People of Community	3.19	2.13	1.90	2.20
III.	School Plant	3.45	2.33	1.64	2.40
IV.	Administration	2.87	2.13	1.31	2.33
V.	School Organization	3.07	2.54	1.63	2.13
VI.	Instructional Materials	3.26	2.20	1.62	2.13
VII.	Faculty	2.91	2.27	1.64	2.40
VIII.	Students	3.36	2.07	1.77	2.33
IX.	Particular Position	2.95	2.33	1.61	2.13
	Total Mean I - IX	3.13	2.24**	1.66	2.26

* This and all other values in this column represent mean scores (see table) for the evaluation assigned by the several teachers to each item.

**The population of the 15 highest and 15 lowest change from category to category; this is the difference in the mean criterion score.

TABLE XIII

THE MEAN VALUE FOR THE 15 MOST DISSATISFIED AND THE 15 LEAST DISSATISFIED TEACHER SCORES CALCULATED FOR THE SEVERAL FACTORS AND THE M-BLANK CRITERION (X_2)

Environmental Factors		15 Most Dissatisfied		15 Least Dissatisfied	
		Mean Score	M-Blank Criterion	Mean Score	M-Blank Criterion
I.	Community	3.10	2.27	1.83	2.20
II.	People of Community	3.19	2.33	1.90	2.27
III.	School Plant	3.45	2.20	1.74	2.27
IV.	Administration	2.87	2.47	1.31	2.20
V.	School Organization	3.07	2.47	1.63	2.07
VI.	Instructional Materials	3.26	2.53	1.62	2.07
VII.	Faculty	2.91	2.47	1.64	2.07
VIII.	Students	3.36	2.33	1.77	2.27
IX.	Particular Position	2.95	2.53	1.61	2.48
	Total Mean I - IX	3.13	2.40	1.66	2.21

TABLE XIV

THE MEAN VALUE FOR THE 15 MOST DISSATISFIED AND THE 15 LEAST DISSATISFIED TEACHER SCORES CALCULATED FOR THE SEVERAL FACTORS AND THE COMPOSITE CRITERION (X_0)

Environmental Factors		15 Most Dissatisfied		15 Least Dissatisfied	
		Mean Score	Composite Criterion	Mean Score	Composite Criterion
I.	Community	3.10	2.45	1.83	2.48
II.	People of Community	3.19	2.60	1.90	2.71
III.	School Plant	3.45	2.48	1.64	2.64
IV.	Administration	2.87	2.63	1.31	2.61
V.	School Organization	3.07	2.73	1.63	2.62
VI.	Instructional Materials	3.26	2.53	1.62	2.53
VII.	Faculty	2.91	2.64	1.63	2.86
VIII.	Students	3.36	2.58	1.77	2.61
IX.	Particular Position	2.95	2.72	1.61	2.48
	Total Mean I - IX	3.13	2.60	1.66	2.62

tion to the M-Blank criterion the fifteen most dissatisfied teachers received a less favorable efficiency rating. It should be noted that there is much inconsistency among the various individuals that constitute the two groups.

One would ordinarily assume that inasmuch as the conditions, by and large, in the smaller schools are not as satisfactory as in larger schools (certainly with respect to the physical plant materials of instruction and in some instances the character of the pupils) that teachers in smaller schools would show more dissatisfaction than teachers in larger schools. This suggestion is borne out by the data in Table XIVa. In general, the teachers almost without exception in the smaller communities are more dissatisfied than teachers in the larger communities. Approximately half of these teachers (7 out of 15) received higher efficiency ratings than the teachers in larger communities.

This is in accordance with expectation inasmuch as there are certain things with respect to which good teachers showed dissatisfaction as well as poor teachers.

Correlational Analysis

A further analysis of the data was made through use of correlational techniques. Correlations were calculated between the categories of Table XV and teacher efficiency. These range from -.06 to +.41; a number were near zero. From these data it appears that there is a positive relationship between teacher efficiency and the sort of people that make up the community. There is also a positive correlation between criterion X_1, which is the State Department rating, and between all aspects of the situation and criterion X_4 which was Montross' criterion. The highest positive correlations are between the School Organization Y_5, Instructional Materials Y_6, The Faculty Y_7, Mean Total Y_0, and X_1, and X_4. The low and zero correlations indicate no relationship. It should be noted that some of the relationships are negative, e.g., — indicating that high dissatisfaction in some instances is associated with efficiency.

Correlations between the M-Blank ratings and certain categories were among the highest. This supports one of the earlier findings wherein the 15 most dissatisfied teachers received less favorable M-Blank ratings than the 15 least dissatisfied. To gain a better understanding of efficiency between the M-Blank and responses of all the subjects to the four categories in which positive correlations were found, the multiple correlation technique was applied and the results are given in Table XVa.

It may be noted in this connection, that relatively high positive intercorrelations (ranging between .59 and .83) were found between the categories pertaining to the students and school organization, students and instructional materials, students and faculty, faculty and school organization, and instructional materials and school organization. These high intercorrelations would appear to indicate that teachers tended to respond to the various categories listed with a generalized attitude of satisfaction or dissatisfaction, and that this generalized attitude was reflected in efficiency ratings received on the M-Blank to a certain extent. The multiple correlation obtained between the M-Blank ratings and the responses to the four categories was 0.43.

Analysis of Responses of the Interviewed Sample

A further study was made of the fifteen subjects who had not returned the inventory. They were interviewed to obtain their reactions to selected aspects of their situations.

After rapport had been established they were asked the following questions:

1. With what aspects of the community would you approve or disapprove?
2. What aspects of the people of the community would you approve or disapprove?
3. What aspects of the school plant would you approve or disapprove?
4. With what aspects of the administration would you approve or disapprove?
5. With what aspects of the school organization would you approve or disapprove?
6. With what aspects of the instructional materials would you approve or disapprove?
7. With what aspects of the faculty would you approve or disapprove?
8. With what aspects of the student body would you approve or disapprove?
9. With what aspects of the particular position would you approve or disapprove?

For those items in each category to which the subject responded where satisfaction was expressed, a value of plus 1 was assigned. For those items to which the subject responded with dissatisfaction, a value of minus 1 was assigned. When the subject neither approved nor disapproved, a zero value was assigned. Satisfaction-dissatisfaction scores were computed for this three-point scale and the responses converted into a percent of satisfaction-dissatisfaction.

The individual responses to the selected items of the Inventory are given in Appendix B-5. A summary of the responses of the fifteen subjects are given in Table XVI. This table shows the sum of the approval, neutral, and disapproval responses for each category, and the mean percent of satisfaction-dissatisfaction for the fifteen subjects' response to this category.

The rank order in which the sample of fifteen

TABLE XIVa

THE MEAN VALUE FOR THE 15 SMALLEST SCHOOL COMMUNITIES AND THE 15 LARGEST SCHOOL COMMUNITIES CALCULATED FOR THE COMPOSITE CRITERION (X_0) AND THE SATISFACTION-DISSATISFACTION SCORES

Fifteen Smallest School Communities			Fifteen Largest School Communities		
Subject Number	Dissatisfaction-Satisfaction Scores	Composite Efficiency Rating (X_0)	Subject Number	Dissatisfaction-Satisfaction Scores	Composite Efficiency Rating (X_0)
37	2.70	4.00	33	1.84	2.50
18	2.94	2.75	38	2.55	3.50
25	2.39	3.00	5	2.53	1.00
17	3.06	1.75	6	1.79	2.00
9	2.04	2.00	13	1.53	2.00
42	2.52	3.25	44	2.21	2.00
26	3.18	2.00	41	2.39	1.65
24	2.93	2.00	23	1.94	3.25
27	1.83	2.50	10	2.41	4.67
2	2.11	3.75	3	2.55	2.00
22	2.99	2.50	39	2.09	2.50
29	2.59	2.75	28	1.95	3.50
16	2.85	2.50	35	2.62	2.00
15	3.42	3.00	4	1.67	2.25
19	2.96	2.75	14	1.68	3.00
Total	40.51	40.50		31.75	37.82
Mean	2.70	2.70		2.11	2.52

TABLE XV

MEASURES OF SATISFACTION-DISSATISFACTION CORRELATED WITH MEASURES OF TEACHING EFFICIENCY

N	Criterion		Community	People of Community	School Plant	Administration	School Organization	Instructional Materials	Faculty	Students	Particular Position	Mean Total
			Y_1	Y_2	Y_3	Y_4	Y_5	Y_6	Y_7	Y_8	Y_9	Y_0
45	Composite	(X_0)	.06	.03	.04	.04	.02	.01	-.06	-.03	.17	.05
45	Principals' Acceptability	(X_3)	.01	.13	.05	-.01	.04	.04	.00	-.01	.07	.03
45	Wisconsin Adaptation of the M-Blank	(X_2)	.02	.11	.13	.10	.27	.32	.29	.20	-.02	.26
36	Criterion	(X_1)	.16	.10	.p8	.06	.01	.08	.04	.09	.13	.10
24	Criterion	(X_4)	.21	.17	.28	.20	.19	.22	.19	.08	.41	.26

TABLE XVa

CORRELATIONAL MATRIX FOR SELECTED CATEGORIES OF THE INVENTORY

		X_1	X_2	X_3	X_4	X_5
M-Blank	(X)	1.00	.27	.32	.29	.20
School Organization	(X)	.27	1.00	.83	.75	.59
Instructional Materials	(X)	.32	.83	1.00	.10	.67
Faculty	(X)	.29	.75	.10	1.00	.65
Students	(X)	.20	.59	.67	.65	1.00

Note: The multiple regression equation, when calculated, became

$$Z_1 = .61\ Z_2 + .06\ Z_3 + (-.21)Z_4 + .25\ Z_5$$

responded to the nine categories and the rank order in which the original group of forty-five responded are presented in Table XVII.

From inspection of the table it may be noted that the rank order of the mean responses of the fifteen subjects interviewed was identical with the original forty-five with respect to five categories: The Students, The People of the Community, The Community, The Particular Situation, and The Administration. Rank orders differed by 1 or 2 with respect to Instructional Materials, the Faculty, and the School Organization. A wide difference was found, however, with respect to the two groups' responses to the school plant. In general, the responses of those interviewed did not differ markedly from those filling out the Inventory. Those interviewed, however, rated all categories of the environment less satisfactory than did the original group.

Analysis of Case Studies

Ten case studies are here presented, which include the five most satisfied teachers and the five most dissatisfied teachers. One dissatisfied teacher was omitted because of the insufficiency of data available.

Each case study is presented in two parts. The first part presents general information relative to such items as age, sex, marital status, family data, parents' education, parents' occupation, teacher preparation, number of different schools attended, degree of self support, jobs held for pay, number of trips taken, veteran, and experience in youth leadership. The second part summarizes each subject's responses to the various categories of the Inventory (Appendix B-1). In this part of the case study, the major sources of satisfaction or dissatisfaction are identified, the mean efficiency rating is reported, and the relationship between satisfaction and efficiency rating indicated.

SUBJECT NUMBER 21

The analysis of the subject's responses to the various items of the Inventory (Table X) shows that satisfaction was expressed with such frequency and with such degrees of intensity as to indicate a generally positive response. The mean total percent of satisfaction is 76.5. In this sense this teacher is the most satisfied of the group of teachers studied in this investigation. The four categories to which the subject responded with the most satisfaction were the administration, 97.0 percent; the school plant, 97.0 percent; the instructional materials, 95.5 percent; and the school organization, 89.5 percent. In regard to the administration (Appendix B-1) the subject responded in a highly favorable degree to all items, including the board of education, the accreditation of the school, and the superintendent. Satisfaction was also registered for standards of student promotion and use of democratic procedures. The items of the school plant to which the subject responded in a highly favorable degree were the site of the school plant; the school building and floors; hearing; lighting; rooms in the building; toilet facilities; furniture; faculty rooms; and the adequacy, competency and cooperativeness of custodial service. There were no items of the school plant to which the subject responded in any degree of dissatisfaction.

This subject received a composite efficiency rating (X_O) of 2.75, which is slightly above average. This teacher ranked 28.5 from the top in the group of forty-five teachers.

SUBJECT NUMBER 13

The analysis of the subject's responses to the various items of the Inventory (Table X) shows that satisfaction was expressed with such frequency and with such degrees of intensity as to indicate a generally positive response. The mean total percent of satisfaction is 73.5. The five categories to which the subject responded with the most satisfaction were: the instructional materials, 92.0 percent; the students, 91.0 percent; the particular position, 91.0 percent; the school organization, 83.5 percent, and the faculty, 78.5 percent. The items in regard to the instructional material (Appendix B-1) to which the subject responded in a highly favorable degree were, all items in regard to the school library, audio-visual materials, text materials, aids for classroom and laboratory, and standardized test materials. Satisfaction was also registered with reference to provisions for field trips and outside talent. There were no items of the instructional materials to which the subject responded with dissatisfaction. The items in regard to the students to which the subject responded in a highly favorable degree were student enrollment, student residences and the performance of students in respect to attendance, level of scholarship, extra-curricular participation, extent of community activity, extent of social activities and percent employed. Satisfaction was also registered with reference to behavior, loyalty, school pride, cooperation and friendliness, as was satisfaction registered for student attitudes toward fellow students, faculty, and rival schools. The percent going to college was also given a favorable response. There were no items with reference to students to which the subject responded with dissatisfaction.

The subject received a composite efficiency rating (X_O) of 2.00 which places him 12th in the whole group of forty-five.

SUBJECT NUMBER 21

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS' OCCUPATION
23	Female	Single	One older brother	Mother: completed twelfth grade Father: completed college	Father: Professor, University

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED	DEGREE OF SELF-SUPPORT	JOBS HELD FOR PAY
Major: Home Economics Minor: Science	Elementary: 1 Secondary: 1 College: 1	Since College: 98%	Domestic: 2

NUMBER TRIPS TAKEN (NON-MILITARY)	VETERAN	EXPERIENCE OF YOUTH LEADERSHIP
Over 500 miles: 6 Foreign country: 1		Class office held: 1

SUBJECT NUMBER 13

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS' OCCUPATION
25	Male	Single	One younger brother	Mother: completed normal school Father: completed eighth grade	Father: Foreman, paper mill

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED	DEGREE OF SELF-SUPPORT	JOBS HELD FOR PAY
Major: Chemistry Minors: Mathematics, General Science	Elementary: 1 Secondary: 2 College 1	College: 50% Since College: 100%	Professional: 1 Agricultural: 1 Factory 1 Manual 1

NUMBER TRIPS TAKEN (NON-MILITARY)	VETERAN	EXPERIENCE OF YOUTH LEADERSHIP
None	18 months domestic service 12 months foreign service Navy Rank: Ph M 1/C	Camp counseling: 9 months Scout Leader: 7 years

TABLE XVI

SUMMARY OF THE RESPONSES OF THE FIFTEEN SUBJECTS OF THE INTERVIEW

Situations	P	%	O	N	%
I. The Community					
With what aspects of the Community would you approve or disapprove?					
a) State	12	80	0	3	20
b) Accessibility	6	40	0	9	60
c) Cleanliness	8	53	0	7	47
d) Church groups	9	60	6	0	0
e) Library	4	27	0	11	73
f) Health services	8	53	0	7	47
g) Social groups	7	47	0	8	53
h) Living quarters	9	60	0	6	40
i) Cultural opportunities	4	27	0	11	73
Total	67	440	6	62	413
Mean		52			48
II. People of the Community					
With what aspects of the people of the Community would you approve or disapprove?					
a) Quality of everyday language usage	2	13	0	13	87
b) Type of occupations	4	30	2	9	70
c) Average family income	4	36	4	7	64
d) Educational level	4	27	0	11	73
e) Interest in the arts	2	22	6	7	78
f) Behavior characteristics	3	43	8	4	57
g) Hospitality	8	57	1	6	43
h) Cooperation with school	7	58	3	5	42
Total	34	286	24	62	514
Mean		35			65
III. School Plant					
With what aspects of the School Plant would you approve or disapprove?					
a) Convenience of location	12	86	1	2	14
b) Freedom from hazards	8	65	2	5	15
c) Adequacy of heating	13	87	0	2	13
d) Adequacy of lighting	12	80	0	3	20
e) Adequacy of rooms	9	60	0	6	40
f) Adequacy of furniture	5	33	0	10	67
g) Provision for faculty privacy	4	27	0	11	73
h) Adequacy of custodial service	8	53	0	7	47
Total	71	491	3	46	289
Mean		61			39

P = Approval O = Neutral N = Disapproval

TABLE XVI (Continued)

Situations	P	%	O	N	%
IV. The Administration					
With what aspects of the Administration would you approve or disapprove?					
a) Education of the Board	9	75	3	3	25
b) Philosophy of the Board	10	83	3	2	17
c) Rules and regulations of the Board	13	87	0	2	13
d) Superintendent training and degrees	9	75	3	3	25
e) Superintendent hired and amount of experience	11	85	2	2	15
f) Superintendent educational philosophy	13	93	1	1	7
g) Administrative policy in regard to:					
1. Student promotion	5	22	0	10	67
2. Teacher experimentation	7	58	3	5	42
3. Use of democratic procedures	10	67	0	5	33
Total	87	656	15	33	244
Mean		73			27
V. School Organization					
With what aspects of the School Organization would you approve or disapprove?					
a) Type of grading system used	11	73	0	4	27
b) Rigidity of use of grading system	7	47	0	8	53
c) Broadness of curricular offerings	5	33	0	10	67
d) School grouping of students' purpose	5	50	5	5	33
e) Type of student control used	6	40	0	9	60
f) School assemblies, frequency and purpose	6	40	0	9	60
g) Type and amount of guidance provided	4	27	0	11	73
h) Guidance aids available to teachers	2	13	0	13	87
i) Health examinations	7	47	0	8	53
j) Frequency and purpose of teachers' meetings	5	33	0	10	67
k) Value of meetings to teachers	4	27	0	11	73
Total	62	430	5	98	653
Mean		39			61

TABLE XVI (Continued)

Situations	P	%	O	N	%
VI. Instructional Materials					
With what aspects of the Instructional Materials would you approve or disapprove?					
a) Library's size and number of references	3	20	0	12	80
b) Library's adequacy in all areas	2	13	0	13	87
c) Visual aids available	9	60	0	6	40
d) Quantity of textbooks	11	73	0	4	27
e) Adequacy of laboratory material	5	33	0	10	67
f) Extent of the use of standard test materials	4	27	0	11	73
g) Provision for field trips	7	47	0	8	53
h) Provision for outside talent	3	20	0	12	80
Total	49	293	0	76	507
Mean		37			63
VII. The Faculty					
With what aspects of the Faculty would you approve or disapprove?					
a) Age range	9	60	3	3	20
b) Training in years	10	67	0	5	33
c) Faculty experience in years	9	60	1	5	33
d) Percent of faculty living out of town	8	53	0	7	47
e) Amount of help for faculty use	3	20	0	12	80
f) Sick leave provisions	11	73	0	4	27
g) Adequacy of professional library	2	13	2	11	73
h) Method of choosing faculty	9	60	0	6	40
i) Method of evaluating faculty	5	33	5	5	33
j) Base used in evaluation	4	27	6	5	33
k) Purpose for evaluation	4	27	5	6	40
l) Friendliness of faculty	12	80	0	3	20
Total	86	573	22	72	479
Mean		54			46

TABLE XVI (Continued)

Situations		P	%	O	N	%
			VIII. The Students			
With what aspects of the Student Body would you approve or disapprove?						
a)	Pupil teacher ratio	6	40	0	11	73
b)	Distance of students from school	5	33	0	10	67
c)	Student performance as to:					
	1. Attendance	2	13	0	13	87
	2. Level of scholarship	3	20	0	12	80
	3. Behavior	3	20	0	12	80
	4. Cooperation	6	40	0	9	60
	5. Appearance	5	33	0	10	67
	6. Friendliness	11	73	0	4	27
d)	Student attitudes in regard to:					
	1. Toward fellow students	7	47	0	8	53
	2. Toward learning	2	13	0	13	87
	3. Toward faculty	5	33	0	10	67
	4. Towards rival schools	8	60	0	7	47
Total		63	425	0	119	795
Mean			35			65
			IX. The Particular Position			
With what features of the Particular Position would you approve or disapprove?						
a)	Number of classes	8	53	0	7	47
b)	Appropriateness of your training	12	80	0	3	20
c)	Size of classes	5	33	0	10	67
d)	Time spent on extra-curricular activities	3	20	2	10	67
e)	Home room responsibility	4	27	7	4	27
f)	Requirement of lesson plans	8	53	3	4	27
g)	Time consumed by community duties	8	53	0	7	47
h)	Bases for determining salary	5	33	6	4	27
i)	Nature of contract provisions	10	67	3	2	13
j)	Bases for granting promotion	6	40	4	5	33
k)	Teaching method desired	8	53	5	2	13
l)	Student relations desired	12	80	2	1	7
m)	Type of discipline wanted	7	47	0	8	53
n)	Committee work required	8	53	2	5	33
Total		104	692	34	72	481
Mean		59				41

TABLE XVII

RANK ORDER OF THE RESPONSES OF THE FIFTEEN SAMPLE AND ORIGINAL FORTY-FIVE SUBJECTS TO SELECTED AND ALL THE CATEGORIES OF THE INVENTORY RESPECTIVELY

Category	Rank Order of Interviewed Sample of 15	Rank Order of Original Sample of 45
Administration	1	1
School Plant	2	7
Particular Situation	3	3
Faculty	4	2
Community	5	5
School Organization	6	4
Instructional Materials	7	6
People of the Community	8.5	8
The Students	8.5	9

SUBJECT NUMBER 32

The analysis of the subject's responses to the various items of the Inventory (Table X) shows that satisfaction was expressed with sufficient frequency and with such degrees of intensity as to indicate a generally positive response. The mean total percent of satisfaction is 72.0. The five categories in rank order to which the subject responded with the most satisfaction were instructional materials, 91.5 percent; school plant, 89.0 percent; students, 88.0 percent; school organization, 86.0 percent; and administration, 78.0 percent. The items in regard to the instructional materials (Appendix B-1) to which the subject responded in a highly favorable degree were all items in regard to the school library, audio-visual material, text material, standardized test material and supplementary material. In addition, in regard to the instructional materials, degrees of satisfaction were registered for equipment furnished, condition and appropriateness of aids to classrooms and laboratories. The subject responded with dissatisfaction to only one item in reference to instructional materials which was, the amount, number and size of aids for classroom and laboratories. The items in regard to the school plant (Appendix B-1) to which the subject responded in a highly favorable degree were all items in regard to the site of school plant, the school building and floors, heating, lighting, rooms in the building, toilet facilities, furniture, faculty rooms and custodial service. There were no items of the school plant to which the subject responded in degree of dissatisfaction.

The subject received a composite efficiency rating (X_0) of 3.00, which places him 32.5 in the whole group of forty-five.

SUBJECT NUMBER 4

The analysis of the subject's responses to the various items of the Inventory (Table X) shows that satisfaction was expressed with sufficient frequency and with such degrees of intensity as to indicate a generally positive response. The total mean percent of satisfaction was 66.5. The five highest satisfaction scores were with reference to students which were 100 percent, the school plant which was 83.0 percent, the community which was 78.0 percent, the people of the community which was 76.0 percent, and the administration which was 75.0 percent.

There were no items with regard to the students to which this teacher responded with dissatisfaction.

This subject responded with dissatisfaction to only one item with reference to the school plant (Appendix B-1), namely, the cooperativeness of the custodial service. All other items were scored in such a manner as to indicate a high degree of satisfaction.

This subject received a composite (X_0) teacher efficiency rating of 2.25 which places him 18th in the whole group of forty-five.

SUBJECT NUMBER 14

The analysis of the subject's responses to the various items of the Inventory (Table X) shows that satisfaction was expressed with such frequency and with such degrees of intensity as to indicate a generally positive response. The total mean percent of satisfaction was 64.0. The five highest scores of satisfaction in rank order are: the administration, 100 percent; school organization, 78.5 percent; faculty, 75.5 percent; instructional materials, 74.0 percent, and the students, 71.5 percent.

The subject responded to all the items of the administration (Appendix B-1) with a 100 percent of satisfaction.

The items to which the subject responded with satisfaction in regard to the school organization were: the school year, daily sessions, grading system used, school curriculum, the school extra-curricular, methods of student control, and school assemblies. In addition, satisfaction was expressed with the aids available to teachers for school guidance of students, pupil services in relation to health, nutrition and employment aids, also teacher meetings as to frequency, purpose, procedure and time of meeting, along with public programs given by the school.

The items to which the subject reponded to as being dissatisfactory were: the type and amount of guidance provided, and the person or persons responsible for the guidance of students. In addition dissatisfaction was expressed as to the value to the participant of teachers' meetings.

This subject received a composite (X_0) teacher efficiency rating of 3.00, which places him 32.5 in the whole group of forty-five.

SUBJECT NUMBER 15

The analysis of the subject's responses to the various items of the Inventory (Table X) shows that dissatisfaction was expressed with such frequency and with such degrees of intensity as to indicate a generally negative response. The mean total percent of dissatisfaction was -21.0. The five categories to which the subject responded with the most dissatisfaction were: the instructional materials, -66.0 percent; the students, -54.0 percent; school plant, -45.0 percent; administration, -44.5 percent; and the school organization, -27.0 percent.

The items in regard to the instructional materials (Appendix B-1) to which the subject responded in a dissatisfactory manner were all

SUBJECT NUMBER 32

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS OCCUPATION
22	Female	Single		Mother: completed 2 years college Father: completed eighth grade	Father: custodian local school Mother: teacher

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED	DEGREE OF SELF-SUPPORT	JOBS HELD FOR PAY
Major: Business Education Minor: Economics English	Elementary: 1 Secondary: 2 College: 1	Since college: 100%	Professional: 1 Clerical: 1

NUMBER TRIPS TAKEN (NON-MILITARY)	VETERAN	EXPERIENCE OF YOUTH LEADERSHIP
None		Sunday school teaching: 2 years Class office: 3 years Pres., Young Peoples Christian Endeavor: 1 year

SUBJECT NUMBER 4

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS' OCCUPATION
25	Male	Single	Three older sisters	Mother: completed eighth grade Father: completed twelfth grade	Mother: inspector Parker Pen Co. Father: retired railroad clerk

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED		DEGREE OF SELF-SUPPORT		JOBS HELD FOR PAY	
Major: Physical Education Minor: History Science	Elementary: Secondary: College:	2 1 1	High school: College: Since college:	10% 90% 100%	Professional Proprietary Sales work Domestic Manual	1 1 2 1 3

NUMBER TRIPS TAKEN (NON-MILITARY)	VETERAN	EXPERIENCE OF YOUTH LEADERSHIP	
Over 500 miles: 2	Domestic service: 18 months Foreign service: 8 months Branch: Army Air Force Rank: Corporal	Tutoring others: Sunday school teaching: Camp counseling: Class offices held: Scout leader Committee member: Guidance director:	1-1/2 yrs. 2 yrs. 3 months 1 year 1 year 1-1/2 yrs. 4 months

SUBJECT NUMBER 14

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS' OCCUPATION
24	Male	Married	Two younger brothers Two younger sisters	Mother: completed business college Father: completed college and seminary	Father: Minister

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED	DEGREE OF SELF-SUPPORT	JOBS HELD FOR PAY
Major: Business Education Minor: Economics	Elementary: 2 Secondary: 1 College: 1 Trade School: 1	High School: 100% College: 100% Since College: 100%	Professional 2 Proprietary 1 Clerical 1 Factory 1 Manual 1

NUMBER TRIPS TAKEN (NON-MILITARY)	VETERAN	EXPERIENCE OF YOUTH LEADERSHIP
Over 500 miles: 10 Foreign country: 1	Domestic Service: 20 months Branch: Army Air Force Rank: PFC	Sunday school teaching: 1 year Class offices held: 2 years President of religious groups at University: 1 year

SUBJECT NUMBER 15

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS' OCCUPATION
26	Male	Married	One older brother	Mother: completed seventh grade Father: completed third grade	Father: Farmer Mother: Domestic worker

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED		DEGREE OF SELF-SUPPORT		JOBS HELD FOR PAY	
Major: American Institutions	Elementary:	3	High school:	25%	Professional	1
Minor: English Economics	Secondary:	2	College:	100%	Proprietary	1
	College:	1	Since college:	100%	Saleswork	1
	Trade school:	1			Agricultural	1
					Factory	2
					Manual	1

NUMBER TRIPS TAKEN (NON-MILITARY)	VETERAN	EXPERIENCE OF YOUTH LEADERSHIP

items in regard to the following: school library, audio-visual materials, text materials, and laboratory classroom aids. The subject responded with satisfaction to only one item in regard to the instructional materials and it was the provision for transportation for field trips.

The items to which the subject responded to as dissatisfactory in regard to the students were: the student's performance as to attendance, level of scholarship, extra-curricular participation, students' behavior, school pride, their cooperation, appearance and friendliness, attitude of students toward fellow students, learning, the faculty, and rival schools. Further dissatisfaction was expressed with the percent going to college, in National Student Association and the number of inter-scholastic championships. There were no items of the students to which the subject responded to in any degree of satisfaction.

The subject received a composite efficiency rating (X_0) of 3.00, which places him 32.5 in the whole group of forty-five.

SUBJECT NUMBER 7

The analysis of the subject's responses to the various items of the Inventory (Table X) shows that dissatisfaction was expressed with sufficient frequency and with such degrees of intensity as to indicate a generally negative response. The mean total percent of dissatisfaction was -13.5 percent. The five categories in which the subject indicated the most dissatisfaction were: the school plant, -26.5 percent; the students, -19.0 percent; administration, -16.5 percent; the particular position, -14.0 percent; and the school organization, -13.0 percent.

Items of the school plant (Appendix B-1) to which the subject responded to as dissatisfactory were: degree of moderness of the school building, provisions for ventilation, inadequate heating, size of the rooms and their decoration, arrangement of the room and freedom from disturbances, usefulness of the furniture, number of faculty rooms with provisions of privacy, and the cooperativeness and competency of the custodial service. There were no items of the school plant to which the subject responded with a degree of satisfaction.

The individual items, in regard to the students, to which the subject responded with a degree of dissatisfaction were: the performance of the students in regard to attendance and level of scholarship, extent of social activities, behavior of students, students' cooperation and appearance, and attitude of students toward learning and faculty. There were no items of the students to which the subject responded in any degree of satisfaction.

The subject received a composite efficiency rating (X_0) of 3.50, which places him 39th in the whole group of forty-five.

SUBJECT NUMBER 26

The analysis of the subject's responses to the various items of the Inventory (Table X) shows that dissatisfaction was expressed with sufficient frequency and with such degrees of intensity as to indicate a generally negative response. The total mean percent of dissatisfaction was -9.0. Five scores of dissatisfaction in rank order were: the community, -25.5 percent; school plant, -20.5 percent; people of the community, -14.5 percent; school organization, -14.0 percent; and the students, -6.5 percent.

The items with reference to the community with which the subject responded to a degree of dissatisfaction were the section of the state in which the community was located, the size of the population of the community along with the community area and spread. Dissatisfaction was also registered with the community accessibility, the surrounding area of the community and the type of industries found. This subject was also dissatisfied with the activities of the churches, schools other than public, along with the availability of good dentists and doctors, and the convenience of a hospital. Still this subject was dissatisfied with the public library as to convenience of opening hours, adequacy of materials and the recency of the books, and other materials. Furthermore, dissatisfaction was registered for social groups as to their diversity, purpose and contribution to the community. The lack of privacy in living quarters, the meal accommodations as to type found available, and the quality of food was indicated as dissatisfactory by this subject. As to rentals, prices paid for meals and groceries, and the cost of sundries this subject registered dissatisfaction. Finally, the subject registered dissatisfaction with the cultural opportunities in the community, the distinctions of the community, leisure time opportunities in regard to amusements and recreation available, along with extra job opportunities.

The items with reference to the community with which this subject expressed degrees of satisfaction were: the state in which the community was located; the type, location, modernness, restrictions, and the degree of privacy provided as to living quarters. As to location of meal accommodations it was found to be satisfactory along with the community demands made on teachers in regard to community responsibility, social taboos, bans on behavior, and other items of this nature.

The items with reference to the school plant (Appendix B-1) with which this subject registered degrees of dissatisfaction were, the type of construction of the school building, along with the rooms. In addition, the subject registered

SUBJECT NUMBER 7

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS' OCCUPATION
25	Male	Married: 2 years Single at present	1 younger brother 1 younger sister 1 older sister	Mother: completed sixth grade Father: completed tenth grade	Father: Assembler

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED		DEGREE OF SELF-SUPPORT		JOBS HELD FOR PAY	
Major: English Minor: French Mathematics	Elementary: Secondary: College:	1 1 1	High school: College: Since college:	20% 75% 100%	Professional Saleswork Factory Manual	1 3 3 3

NUMBER TRIPS TAKEN (NON-MILITARY)		VETERAN	EXPERIENCE OF YOUTH LEADERSHIP
Over 500 miles: Foreign country:	4 1	Domestic Service: 21 months Foreign service: 6 months Branch: Army Rank: Staff Sergeant	

SUBJECT NUMBER 26

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS' OCCUPATION
25	Male	Single	3 older brothers 1 younger sister 1 older sister	Mother: completed tenth grade Father: completed eleventh grade	Mother: seamstress Father: deceased 1941

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED		DEGREE OF SELF-SUPPORT		JOBS HELD FOR PAY	
Major: History Economics Minor: English	Elementary: Secondary: College:	1 1 1	High school: College Since college:	15% 15% 100%	Professional Sales work	1 2

NUMBER TRIPS TAKEN (NON-MILITARY)	VETERAN		EXPERIENCE OF YOUTH LEADERSHIP	
Over 500 miles: 3	Domestic service: Foreign service: Branch: Army Rank: Staff Sergeant	6 months 18 months	Class offices: Activity manager:	2 2 months

dissatisfaction with the toilet facilities available, furniture in the building, and the faculty room with reference to the number, degree of privacy afforded and regulations for its use. The subject responded to only three items with a degree of satisfaction in regard to the school plant and they were the adequacy, competency, and cooperativeness of the custodial service.

This subject received a composite (X_0) teacher efficiency rating of 2.00, which places him 12th in the whole group of forty-five.

SUBJECT NUMBER 17

The analysis of the subject's responses to the various items of the Inventory (Table X) shows that dissatisfaction was expressed with sufficient frequency and with such degrees of intensity as to indicate a generally negative response. The mean total percent of dissatisfaction was -3.0. This teacher was more dissatisfied than satisfied with the following five categories in rank order: the school plant, -47.0 percent; administration, -28.0 percent; instructional materials, -27.0 percent; students, -6.5 percent; and the people of the community, -5.0 percent.

The items in regard to the school plant (Appendix B-1) to which the subject responded with a degree of dissatisfaction were: the freedom from hazards and the appearance of the school grounds, the school building in regard to type of construction, degree of modernness, adequacy of exits, and provision for ventilation. Further, dissatisfaction was expressed with rooms, toilet facilities, floors, and furniture of the building. In addition, dissatisfaction was expressed in the lack of provision for a faculty room, and the adequacy, competency and cooperativeness of the custodial service.

Degrees of satisfaction in regard to the school plant were expressed for the location of the school plant, adequacy of heating and lighting. The items in regard to the administration (Appendix B-1) to which the subject responded in a dissatisfactory degree were the general educational level of the School Board, the practices of the Superintendent, and the administrative policy of the Superintendent in regard to standards for promotion, standards for student eligibility, teacher research and experimentation in the use of democratic procedures. The items in regard to the administration to which the subject responded in a satisfactory degree were the educational philosophy of the Board of Education, and the rules and regulations promulgated by them.

The subject received a composite efficiency rating (X_0) of 1.75, which places him 6th in the whole group of forty-five.

SUBJECT NUMBER 22

The analysis of the subject's responses to the categories of the Inventory (Table X) shows that dissatisfaction was expressed with a sufficient number of items and with such degrees of intensity and frequency that the response would appear to indicate an overall negative response. The balance of responses to all the categories was such that this subject received a mean total percent of satisfaction which was 0.5. The highest dissatisfaction of this teacher was shown in the items of the school plant, -12.5 percent. The instructional materials and the school organization received the same degree of dissatisfaction respectively, -11.5 percent. The next two lowest categories were the particular position, and the faculty receiving scores of -4.0 and 0.0 percent respectively.

The items in regard to the school plant (Appendix B-1) to which the subject responded with a degree of dissatisfaction were the degree of modernness of the building, its provisions for ventilation, and adequacy of performance of heating and lighting. In addition, negative responses were given to adequacy of size, appropriateness of decoration, convenience and arrangement, and the freedom from disturbances of rooms in the building. The subject also responded with dissatisfaction with the condition of the floors, and the lack of a faculty room for privacy. This subject responded to a satisfactory degree to only one item in regard to the school plant which was cooperativeness of the custodial service.

The items to which the subject responded to as being dissatisfactory with reference to the instructional materials (Appendix B-1) in regard to the library were: its size, number of references, its adequacy for all areas, recency of books and materials and their variety and range of difficulty, and the suitability of periodicals. In addition, a negative response was registered for the poor and worn condition of textbooks. There were only two items, in reference to the instructional materials, for which this teacher indicated a degree of satisfaction and they were the up-to-dateness of text materials and the provision for class transportation for field trips.

The items with which this teacher was dissatisfied in reference to the school organization (Appendix B-1) were the vacation allowed, length of the class periods, the rigid use of the school grading system, and with the importance it holds for the pupils. In addition, this teacher registered dissatisfaction with the diversity and variety of extra curricular offerings, type of student control used in the whole school along with the frequency, purpose, responsibility for organiz-

SUBJECT NUMBER 22

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS' OCCUPATION
22	Male	Single		Mother: completed eighth grade Father: completed twelfth grade	Father: Purchasing agent

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED		DEGREE OF SELF-SUPPORT		JOBS HELD FOR PAY	
Major: History Economics Minor: English	Elementary: Secondary: College:	2 1 1	College: Since College:	40% 100%	Professional Manual	1 2

NUMBER TRIPS TAKEN (NON-MILITARY)	VETERAN	EXPERIENCE OF YOUTH LEADERSHIP
None		None

SUBJECT NUMBER 17

AGE	SEX	MARITAL STATUS	FAMILY DATA	PARENTS' EDUCATION	PARENTS' OCCUPATION
22	Female	Single	1 younger brother	Mother: completed college Father: completed college	Father: Buyer

TEACHER PREPARATION	NUMBER DIFFERENT SCHOOLS ATTENDED		DEGREE OF SELF-SUPPORT		JOBS HELD FOR PAY	
Major: French Minor: English	Elementary: Secondary: Colleges:	1 1 2	College: Since College	50% 100%	Professional Clerical Saleswork	1 2 1

NUMBER TRIPS TAKEN (NON-MILITARY)		VETERAN	EXPERIENCE OF YOUTH LEADERSHIP	
Over 500 miles: Foreign country:	3 1		Tutoring others: Sunday school teaching: Class offices held:	3 months 9 months 2-1/2 yrs.

ing, and the value of school assemblies to the students. Also, dissatisfaction was indicated with reference to the type and amount of guidance available to students. Furthermore, this teacher was dissatisfied with the aids available to teachers for the guidance of students. The items to which this subject responded to a satisfactory degree in regard to the school organization were the time of the beginning and closing of the school year and the hour of opening of the daily sessions. Finally, this teacher expressed satisfaction with the provisions made for nutritional needs of the students in school.

This teacher received a composite teacher efficiency rating (X_0) of 3.25, which places him 36th in the whole group of forty-five.

In looking back over the ten case studies, it appears that two of the highly dissatisfied teachers also received high efficiency ratings. These two cases will be examined in somewhat greater detail. Looking at the particular items with which they expressed dissatisfaction, Teacher 26 gave the larger overall negative response of these two teachers, namely, -9.0. While teacher 17 had a negative score of only -3.0, she was highly dissatisfied with the school plant, administration, and instructional materials. In spite of his dissatisfaction with the administration, he secured the highest efficiency rating of all the ten teachers studied. Teacher 26 did not like the community, the school plant, the people in the community, nor the school organization.

If we examine the responses of the two teachers with the highest satisfaction scores and the highest efficiency scores, we find that Teacher 4 was dissatisfied with only one item, namely, the custodial service. Teacher 13 responded with dissatisfaction to no items. In general it would appear from these case studies and other data supplied in this investigation, that teachers are more satisfied than dissatisfied with the learning-teaching situation in which they find themselves, and generally they possess more of this quality than poor teachers. Teachers 17 and 26 as already indicated are exceptions to this statement.

Ordinarily it would be presumed, too, that good teachers would have some definite dissatisfactions. That is, one would expect good teachers to be definitely dissatisfied with what they consider important aspects of the situation, particularly those closely related to the learning-teaching situation. Not to be dissatisfied with such items would indicate, in many instances, incompetency.

A further study of the ten individuals reveals that the five most dissatisfied teachers taught in communities with populations of 200, 519, 956, 1190, and 2050, respectively, while the five most satisfied taught in communities with populations of 1444, 6849, 11088, 11867, and 42365. Four of the five most satisfied teachers worked in larger communities, and the five most dissatisfied teachers worked in smaller communities. This is what one would expect considering the lack of facilities in smaller communities. Two of the five small community teachers were given high efficiency ratings. They probably did find much with which to be dissatisfied.

The analysis of the five most satisfied and dissatisfied teachers would seem to indicate that the size of community may be related to satisfaction-dissatisfaction but not efficiency ratings.

In analyzing the pattern of responses of the four case study teachers who received superior efficiency ratings, it appears that they were more satisfied than the other case study teachers with other items of the Inventory.

SECTION IV

SUMMARY AND CONCLUSIONS

THE PURPOSE of this investigation was to ascertain the relationships of certain environmental factors to teaching success.

The subjects of the study were sixty seniors who had graduated in 1950 from a four-year course in the School of Education at the University of Wisconsin, and who had completed their first year of teaching.

The chief data gathering device employed in the investigation was a Teacher Situation Inventory consisting of two pages of directions and nine sections of items relative to the situation listed under the following categories: the community, the people of the community, the school plant, the school administration, the school organization, the instructional materials, the faculty, the students, and the particular position. The inventory also contained a general information sheet. The Inventory was mailed to sixty-five 1950 graduates; forty-nine filled out and returned the Inventory. Four returns were unusable because they were inadequately filled out. Fifteen of the 16 non-responding individuals were visited and interviewed. Information was also obtained from the superintendent or supervising principal under whom the teacher worked relative to the efficiency of each subject. The criteria of teaching efficiency used were an acceptability rating, the Wisconsin Adaptation of the M-Blank rating, the State Department of Education rating, and a peer rating. A composite (X_0) of the above four measures was also used, plus a composite used by Montross.

The data from the Inventory were tabulated and the mean satisfaction-dissatisfaction determined for all categories of the Inventory for each respondee. These data were studied in re-

lation to the various criteria of teacher efficiency.

Analysis of selected items was also made in regard to the reasons for the subjects' liking or disliking various aspects of the environment in which they found themselves. The responses of the fifteen most satisfied and the fifteen most dissatisfied teachers were examined in some detail in relation to efficiency ratings. An analysis of the responses to selected items of the Inventory obtained from interviewing fifteen people who did not respond to the form was made. This was done to determine how those not returning the Inventory responded to aspects of their environment. Finally, case studies of the five most satisfied and the five most dissatisfied teachers were made to explore in more detail the relationships between the reactions of the teachers to the school-community environoment and their efficiency.

A number of environmental factors were found to be related to teacher efficiency. The findings are summarized relative to the four questions asked earlier:

1. With what situational factors do teachers appear to be more satisfied or dissatisfied?

Teachers appear to be satisfied with: the administration, faculty, particular position, school organization, the community, instructional materials, school plant, people of the community, and students, in the order given. Sixteen teachers were satisfied with all nine factors. Five teachers were dissatisfied with six or more factors. The remaining twenty-four generally showed dissatisfaction with one or two factors. The two situational factors with which dissatisfaction was indicated most frequently were the students and the people of the community. With respect to all nine factors, the mean responses of all teachers showed a degree of satisfaction.

2. What situational factors seem to be associated with teaching success?

Low positive correlations were obtained between each of the efficiency ratings and the mean responses of all teachers to various aspects of the environment. Positive correlations of 0.20 or higher were found between an efficiency rating and the overall responses to the Inventory and for eight of the nine categories included in the Inventory. The analysis of the fifteen most satisfied and the fifteen most dissatisfied teachers' responses showed that the most dissatisfied group received lower satisfactory efficiency ratings than the most satisfied group on the M-Blank. The categories of the environment which appear to be more closely related than others to efficiency in teaching are instructional materials, the students, the faculty, and the school organization. The data with reference to the other two criteria were inconsistent.

3. To what degree can teacher success be predicted on the basis of situational factors?

While there is a positive relationship between efficiency and teacher satisfaction, the correlations are uniformly low, and taken as a group, are not likely to prove of substantial predictive value. In combination with other factors in teacher efficiency one would expect to reduce the error of estimate by adding to the regression equation a situational factor.

4. What situational factors do teachers think should be changed?

Some teachers were satisfied with nearly all aspects of their situations; others were dissatisfied with nearly all aspects of their situation. The following observations seem warranted:

a. The total group of respondees were least satisfied with their students and would like a better attitude from students toward learning, improved scholarship, consistent attendance, better attitudes toward the faculty, and greater desire to go to college.
b. Almost as many respondees were dissatisfied with the people of the community as those satisfied. They preferred a higher general educational level for the people, better everyday language usage, and greater interest in the arts.
c. Many respondees desired a better school plant. Those aspects of the school plant which they would like improved included a room for faculty members, more privacy, and improved personnel and services.
c. The principal improvements suggested in the category related to instructional materials were a larger library and more adequate library facilities for all areas of instruction, more up-to-date materials and a greater variety of classroom aids, better provisions for conducting field trips and more extensive use of community resources.
e. The major improvements desired with reference to community included better cultural and leisure time opportunities, provision for adult education, opportunity for employment, and more adequate bus and train schedules.
f. Those aspects of school organizations which received the greatest attention with suggestions for improvement were more and better organized school assemblies, better counseling and guidance services with a skilled person to be employed in

more schools and more guidance materials made available to teachers, teacher meetings in which the problems of instructors are given adequate attention, and clearly defined operating procedures for the student council.

g. Some suggestions were made in relation to the particular position for increasing salaries, improving the system of promotion, decreasing the number and size of classes, and decreasing the number of extra-curricular activities assigned to a given teacher.

h. The number, type and competence of assistants to the faculty, the adequacy of the professional library, and the method, purpose, and basis of evaluation of the faculty received many suggestions for improvement.

i. Suggestions were made for improved standards of promotion, for clarifying and improving teacher tenure regulations, and for building better administrator-teacher relations in planning and policy making.

Inasmuch as environment constitutes such an essential part of the field of operations for the education of youth and adults alike, it would seem that persons concerned with teacher education at the preservice and at the inservice level might well direct more attention to the discovery of aspects of the situation in need of improvement. The school administrator might use such information in the management of teaching personnel with particular reference to the environmental conditions within the school community. The teacher education institutions might incorporate such information in organizing the required education courses to acquaint prospective teachers with environmental conditions existing in the field that might limit or enhance their effectiveness. Such information should also enable teacher education institutions to help teachers build understandings, skills, and attitudes necessary to meet various environmental conditions. Teacher education institutions might also utilize findings from this study at the graduate level in courses for supervisors and administrators. Finally, the information should be of value to placement officials in that the abilities of teaching candidates and demands of situations might be considered more intelligently.

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ANALYSIS OF CERTAIN ASPECTS OF TEACHING ABILITY

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SECTION I

THE PROBLEM

Introduction

MANY STUDIES have been made of graduates of teacher training curricula to determine their success as teachers. These studies have been concerned in one way or another with the measurement and evaluation of teaching success. Such evaluation is of considerable interest because of the importance of the teacher in the environment of the child. Baxter (6) points out: "It is no longer enough that the teacher be the possesser of knowledge. Today's teacher must be a 'social engineer', capable of setting up a provocative environment for children's learning, charting the course of each individual child through the ever-changing social relationships in which he is involved and assisting each pupil to grow in his understanding of himself and others." Considering this role of the teacher, it can be readily realized that it is of greatest importance to secure the best possible teachers for our schools.

Teacher training institutions are confronted not only with the problem of selecting those candidates who show the most promise of becoming successful teachers, but also the problem of providing those curricular and extra-curricular activities which will aid those candidates when they have entered the training program. Evaluation of teaching efficiency and identification of the factors which contribute to teaching success are important in both the selection and training of candidates.

Evaluation of teaching success has been approached in many different ways. One approach has been to ask students to list traits or characteristics of the teacher "liked most" and the teacher "liked least". Another approach has been to measure certain characteristics of prospective teachers in training and to correlate these measures with various estimates of success obtained after they had been taught. A third approach has been to study good and poor teachers at the time they are teaching for the purpose of noting qualities or procedures associated with success.

Statement of the Problem

This dissertation is concerned with measures of certain characteristics of good and average teachers obtained at the time they are already teaching. Some preservice achievement measures will be used, but the study is primarily concerned with temperament as measured by objective tests and other measures.

A group of good teachers and a group of average teachers will be defined in terms of three criterion estimates of teaching success: Practice teaching grade, Placement Bureau Rating, and Principal's M-Blank Rating.

The primary purpose of this study is to determine whether a group of good teachers can be differentiated from a group of average teachers in terms of certain measures of preservice achievement, temperament and personality. In order to determine whether a pattern of these characteristics may differentiate the two groups, a multivariate analysis of variance technique will be employed.

Depending on the results of the analysis of variance, a further investigation will be made to determine the relationship between certain of the measured characteristics of teachers and a composite of the criterion estimates. The canonical correlation method proposed by Hotelling (33) will be employed to determine the weights to apply to each of the criterion estimates to form the composite.

The study attempts to answer the following specific questions:

1. Is there a significant difference between the group of good teachers and the group of average teachers in terms of the profile of group means for all the variables?
2. Is there a significant difference between the group of good teachers and the group of av-

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erage teachers in terms of classes of variables (preservice achievement variables, temperament variables and personality variables)?

3. What is the canonical correlation between a weighted composite of the criterion estimates and a linear combination of certain of the preservice achievement, temperament and personality measures?

It appeared from the results of many of the researches in the area that measures of preservice achievement, temperament and personality of teachers might be promising in a study of the evaluation of teaching success.

In this investigation, the preservice achievement measures are those measures obtained for each teacher some time prior to her receiving the Teacher's Certificate and accepting a teaching position. Two preservice achievement measures were obtained from the American Council on Education Psychological Examination administered to each teacher at the time she entered the University of Wisconsin. Two other preservice achievement measures were based on (1) grades earned in professional courses in Education taken during the Junior and Senior years, and (2) grades earned in courses taken in the teaching major.

Temperament is investigated in this dissertation by means of two kinds of measures: (1) alternation tests of flexibility, and (2) creative effort tests of disposition rigidity. Both these kinds of tests are what have been called by Cattell (10a) and others "objective tests of temperament." These objective tests demand no attempt at self-evaluation by the subject, but are speed tests designed to measure ability of the subject to perform some task in a given situation.

Flexibility and disposition rigidity are two components of an aspect of temperament which has been termed perseveration by many writers. Perseveration has many theoretical connotations, such as Spearman's "mental inertia" concept (57) and the "memory phenomenon" interpretation by other writers (25). The present study avoids these connotations by accepting Cattell's (17) definition of disposition rigidity and Kleemeier and Dudek's (38) definition of flexibility.

Cattell defines disposition rigidity as a "difficulty (slowness) in turning from old to new responses to a situation when the individual wills to make them." This temperament factor is best measured by creative effort tests in which the individual tries to perform an old task in a new way. For example, it could be measured by the number of times the subject could write the numbers "237" in the usual way divided by the number of times he could write the same numbers using reverse strokes.

Flexibility is defined by Kleemeier and Dudek as the ability to shift from one task to another. They say this is best measured by alternation tests in which the subject is required to do first one simple task, then another, and finally is required to do both tasks in the same test. The third test is considered the measure of flexibility because the subject is required to shift from one task to another in the same test. For example, the subject might be required in Test 1 to answer as many two-digit addition problems as he could in two minutes, then in Test 2 to answer as many two-digit subtraction problems as he could in two minutes, and finally in Test 3 to answer as many mixed addition and subtraction problems as he could in two minutes. A high score on Test 3 indicates a higher degree of flexibility in shifting from one task to another.

Personality is investigated in this dissertation by a self-evaluation made of five "traits" chosen from a personality inventory.

Certain considerations regarding the meaning of the terms personality and temperament as used in this study are important. Allport (1) speaks of temperament as a certain class of raw material from which personality is fashioned. "Strictly speaking there is no temperament apart from personality, nor any personality devoid of temperament."

The term temperament is usually employed in speaking of dispositions that are almost unchanged from infancy throughout life.

Allport (1) gives this definition of temperament: "Temperament refers to the characteristic phenomena of an individual's emotional nature, including his susceptibility to emotional stimulation, his customary strength and speed of response, the quality of his prevailing mood, and all peculiarities of fluctuation and intensity in mood; these phenomena being regarded as dependent upon constitutional make-up, and therefore largely hereditary in origin."

Significance of the Study

Teacher training institutions attempt in various ways to evaluate candidates for the purpose of selecting those persons who are most likely to become good teachers. Knowledge of factors in teaching success is important in order to increase the effectiveness of these evaluations.

As a result of the present study, differences between good and average teachers, as defined by three criterion ratings, may be indicated or not indicated; in addition, relationships between teaching success and measures of certain teacher characteristics may be indicated or not indicated.

If differences are indicated or if significant relationships are found, this would contribute to

the understanding of factors associated with teaching success. Results of the study should also provide a valuable source for pointing out teacher characteristics which should be investigated in further research.

If differences are not indicated, or significant relationships are not found, it must be concluded that in subsequent research other definitions, measuring devices or general plan of investigation should be employed.

SECTION II

DESIGN OF THE STUDY

The Teacher Population Studied

THE TEACHER population studied consisted of the 1951, 1952 and 1953 women graduates of the University of Wisconsin who had received the Teacher's Certificate from the School of Education and who were still teaching in Wisconsin secondary schools.

The population was further defined to include all those women who were teaching in secondary schools located within approximately one hundred miles of the City of Madison. One hundred and twelve persons were in this group.

From this group of one hundred and twelve persons, the names of sixty persons were randomly drawn. The Fisher-Yates Table of Random Numbers (20) was used in this procedure.

Although this randomly drawn sample consisted of sixty persons, the group finally studied in this investigation consisted of only forty-six persons for whom complete data were available. By the fall of 1954 when the tests used in this study were given, seven members of the sample of sixty had changed their residence from the State of Wisconsin. An additional seven persons had to be eliminated from the sample because two subscores (Quantitative Score and Linguistic Score on the American Council on Education Psychological Examination) used as part of the data in this study, were not available for them. Thus fourteen persons were eliminated from the randomly drawn sample of sixty.

Since fourteen persons were eliminated from the sample of sixty, the group of forty-six women teachers finally studied cannot be considered precisely a randomly drawn sample. In order to estimate the amount of bias which may have resulted from this loss, certain comparisons between the group of forty-six teachers studied and the group of fourteen teachers not studied would seem pertinent. If the two groups are similar in terms of these comparisons, the effects of the bias may be judged a minimum. This would provide some evidence for the use of the sample of forty-six persons in a statistical design requiring the assumption of random sampling.

Comparisons between the group of forty-six and the group of fourteen were made in terms of (A) the Mean Total Grade Point Average for each group and (B) the Median Percentile Rank (total score) for each group on the American Council on Education Psychological Examination. Table I shows these comparisons.

A test of significance of difference between means, given by McNemar (43), was used to test the significance of difference between Mean Grade Point Averages. A sum of ranks test (61), applicable to non-normal distributions, was applied to test the hypothesis of no difference between the two Median Percentile Ranks.

Neither of these differences was statistically significant. Therefore, it would seem the group of forty-six and the group of fourteen were similar in terms of academic achievement as measured by grade point average and intelligence as measured by the American Council on Education Psychological Examination. It is believed the sample of forty-six, while not precisely a randomly drawn sample, may be used in an analysis of variance design.

Description of the Subjects

The forty-six subjects in this investigation were women teachers in secondary schools in Southern Wisconsin. They were all graduates of the University of Wisconsin and had received the Teacher's Certificate from the School of Education. Six members of the group had graduated in 1951, seventeen in 1952 and twenty-three in 1953. The range in ages to nearest birthday was from 22 to 26 years while the average age for the group was approximately 24 years. Nineteen of the group were married and twenty-seven were not. Thirty-four entered the University of Wisconsin as freshmen and completed the entire four year college course at this University. Twelve entered the University as transfer students.

Table II shows the variety of subjects taught by the forty-six teachers.

Certain comparisons between the forty-six women who are subjects in the present study and women graduates of the University of Wisconsin School of Education in previous years are shown in Table III.

The data in Table III would seem to indicate the group in the present study is not markedly different from women graduates of other years in terms of academic achievement.

The Mean Total Score Percentile Rank on the American Council on Education Psychological Examination for the group of forty-six teachers is 62.46. Lins (41a) obtained a mean of 61.42 for the fifty-eight (1942) women graduates who were subjects in his study.

TABLE I

COMPARISON BETWEEN THE GROUP STUDIED AND THE GROUP NOT STUDIED IN TERMS OF TOTAL GRADE POINT AVERAGE AND TOTAL SCORE MADE ON AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION

	Mean Total G. P. Average	Med. %ile Rank (Total Score) ACE
Group of 46 teachers studied	1.92	67
Group of 14 teachers not studied	1.89	63

TABLE II

SUBJECTS OR COMBINATIONS OF SUBJECTS TAUGHT BY THE FORTY-SIX TEACHERS

Subject or Subjects Taught	Number Teachers Teaching Each Subject or Combination
English, English Literature, or English plus another subject	15
Math and Science	4
Home Economics	16
Foreign Language (French, Latin, Spanish)	2
History, Civics, Social Studies	1
Art Education	3
Business Education, Commerce	1
Music	4

TABLE III

COMPARISON BETWEEN SUBJECTS IN PRESENT STUDY AND GRADUATES OF PREVIOUS YEARS

	Subjects in Present Study N = 46	1942 Women Graduates (Lins' Study) N = 58	1950 Women* Graduates N = 136
Total Grade Point Average			
Mean	1.92	1.877	1.889
S. D.	0.38	0.382	0.359

*Data obtained from the Office of Student Personnel Statistics, University of Wisconsin, Madison, Wisconsin.

TABLE IV

TEST-RETEST RELIABILITY ESTIMATES OF KLEEMEIER-DUDEK BATTERY OF FLEXIBILITY TESTS (N = 53)

Name of Test	Test-Retest Reliability Estimate
Two-Digit Numbers	
Addition	.78
Subtraction	.87
Mixed	.88
Word Completion	
Add Final Letter	.59
Add Initial Letter	.71
Mixed	.53
Perceptual Speed	
Count N's	.70
Count W's	.72
Mixed	.75

The group presently studied appear to be reasonably representative of women graduates of previous years who have received the Teacher's Certificate from the University of Wisconsin School of Education.

Data-Gathering Devices Employed

Twenty-three variables were involved in the present study. Three of the variables were estimates of teaching success and twenty were measures of certain teacher characteristics. Of these twenty measures of teacher characteristics, four were measures of preservice achievement, five were measures of personality and eleven were objective tests designed to measure certain aspects of temperament.

The twenty-three variables are listed below. The number preceding each variable is used to identify that measure in reporting the analysis of the data. A code symbol follows each measure.

Measures of Preservice Achievement

(1) Quantitative Score (%), American Council on Education Psychological Examination, 1948 edition	Q
(2) Linguistic Score (%), American Council on Education Psychological Examination	L
(3) Professional Grade Point Average, based on grades earned in Education 73, 74, and 75	PGPA
(4) Grade Point Average earned in courses taken in teaching major	MGPA

Objective Measures of Temperament

Creative Effort Tests—Cattell

(5) Reverse Strokes Test	Disposition Rigidity	Sub 6
(6) The Alphabets Test	Disposition Rigidity	Sub 7

Battery of Alternation Tests—Kleemeier-Dudek

(7) Two-Digit Numbers, Addition	TDN Add
(8) Two-Digit Numbers, Subtraction	TDN Sub
(9) Two-Digit Numbers, Mixed Flexibility	TDN Mix
(10) Word Completion, Add final letter	WC Final
(11) Word Completion, Add initial letter	WC Initial
(12) Word Completion, Mixed Flexibility	WC Mix
(13) Perceptual Speed, Count N's	PS N's
(14) Perceptual Speed, Count W's	PS W's
(15) Perceptual Speed, Mixed Flexibility	PS Mix

Guilford-Zimmerman Temperament Survey

(16) General Activity vs., Slowness Inactivity	G
(17) Restraint vs., Impulsiveness	R
(18) Ascendance vs., Submission	A
(19) Sociability vs., Shyness, Seclusiveness	S
(20) Emotional Stability vs., Neuroticism	E

Criterion Estimates of Teaching Success

(21) Practice Teaching Grade, Education 75	PT
(22) Placement Bureau Rating	PB
(23) Principal's M-Blank Rating	PM

Sources of Data

The following data were obtained from University records:

1. Quantitative Score and Linguistic Score were obtained from records kept at the Student Counseling Center of the University. These scores were derived from the American Council on Education Psychological Examination which is administered to all students entering the University.
2. The Grade point averages earned in the three professional Education courses and in the courses taken in the major teaching field were obtained from records in the Registrar's Office of the University.

Data for assessing temperament was obtained by administering the two creative effort tests and the Kleemeier-Dudek Battery of alternation tests to each of the forty-six subjects. Two measures of temperament were obtained from the creative effort tests and three measures of temperament were obtained from the battery of alternation tests.

Data for assessing personality was obtained by administering the Guilford-Zimmerman Temperament Survey to each teacher. Scores on only five of the ten traits assessed by this inventory were included in the data for this study.

An estimate of the success of each teacher was obtained from the principal of the school in which the teacher was currently teaching. A letter explaining the study and enclosing a copy of the Wisconsin Adaptation of the M-Blank (Appendix B)* was sent to each principal.

*All references to Appendices may be found in original thesis, Library, University of Wisconsin.

The practice teaching grade for each subject was obtained from records on file in the Wisconsin High School Office of Student Teacher Records.

The Placement Bureau rating was obtained from the Assistant Director of the University of Wisconsin Teacher Placement Bureau.

Description of the Measures Employed

(1) American Council on Education Psychological Examination for College Freshmen (Appendix C)

Percentile rank on each of two subscores Quantitative and Linguistic, yielded by this examination were measures of intelligence employed in this study. Fourteen of the subjects who entered the University in the Fall of 1948 were administered the 1947 edition of the test; the remainder of the subjects (32) who entered in the Fall of 1949 or as transfers in 1950, were administered the 1948 edition of the test. Percentile ranks were determined on the basis of national norms.

The examination consists of six tests grouped in two general classes as follows:

Quantitative Tests (Q Score):	Linguistic Tests (L Score):
Arithmetical Reasoning	Same-Opposite
Number Series	Completion
Figure Analogies	Verbal Analogies

Subscores based on results of these two sets of tests were used in the present investigation. Factor analysis studies have indicated that two distinct kinds of mental abilities appear to be involved in performance on these six tests (19). High Q and L scores indicate high levels of performance in each of the abilities assessed.

(2) Professional grade point average

This average was computed on the basis of grades earned in Education 73, 74 and 75. These are professional courses in education offered by the School of Education at the University of Wisconsin. A high grade point average indicated a higher level of academic achievemnt in professional education courses.

(3) Grade point average in the major teaching field

All candidates for the Teacher's Certificate are required to take a certain number of credits in a major teaching field. An average of the grades earned in these courses was computed for each subject. Professional education courses were excluded from this average, as well as the first two years of basic courses required of all freshmen and sophomores. A high grade point average indicated higher academic achievement in the major teaching field.

(4) Creative Effort Tests of Disposition Rigidity (Ref., 13. Also Appendix C 4)

1. Reverse Strokes—This test consisted of two parts: In Part A the subject wrote the numbers "237" as many times as he could in one minute. In Part B, the subject wrote the same numbers for one minute, using a reversed stroke, i.e., beginning at the bottom of the "7" and ending at the top of the "2". The score was the number of digits written correctly in Part A divided by the number of digits written correctly in Part B. Since a low score on this test indicated a higher degree of ability to overcome rigidity, these scores were reflected in order to be consistent with scores on the remaining variables.

2. Alphabet Test—This test consisted of three parts. In each part, the subject was to write as many letters as he could in the time allotted, as follows:

Part A, the letters "abcd" were to be written	30 seconds
Part B, the letters "ABCD" were to be written	30 seconds
Part C, the letters "aAbBcCdD" were to be written	30 seconds

The final score was the number of letters written correctly in Part A plus Part B divided by twice the number written correctly in Part C. As in the Reverse Strokes Test, a low score indicated better performance; therefore the scores made on this test were reflected in order to be consistent with the remainder of the data.

(5) Battery of Alternation Tests of Flexibility (Ref., 38. Also Appendix C 3)

This battery consisted of a total of nine tests. There were three tests in each of three areas: Numerical Speed, Verbal Abilities, and Perceptual Speed. In each area, the subject was required to do first one task, then another task, and finally in the third test was required to shift from one task to another in the same test. This third test was considered the measure of flexibility. Thus three measures of flexibility were obtained from the battery of nine tests:

1. Flexibility in Numerical Abilities
2. Flexibility in Verbal Abilities
3. Flexibility in Perceptual Speed

All tests in the battery were speed tests and were administered in two parts so that estimates of test-retest reliabilities could be computed. Answers to the tests were recorded on IBM sheets. Since many of the subjects were tested individually, a set of standard directions (Appendix D) was used each time the tests were administered.

The tests in each of the three areas are described as follows:

1. Two-Digit Numbers Test (Numerical Abilities)

Each of the three tests in this area consisted of 120 items administered in two parts of 60 items each. The time limit for each part was 90 seconds. The subject's task was to indicate on an IBM answer sheet whether answers to the problems as given were right or wrong. In the first test the subject responded to addition problems and in the second test the subject responded to subtraction problems. The third test consisted of mixed items, i.e., both addition and subtraction problems. In responding to the mixed items on this test the subject was required to shift from one task to another.

A high score on the third test is an indication of a higher level of flexibility in the area of numerical abilities.

2. Word Completion Tests

This series consisted of 3 tests of 60 items each. Each test was administered in two parts of 30 items each with a time limit of 90 seconds for each part. The subject's task was to select the one letter from among five alternatives which formed a word when used with a given stem of three letters. None of the stems were three letter words in and of themselves.

In the first test in this series, the subject was to find the letter which, added to the front of the stem, made a complete word. In the second test, subject was required to find the letter which, added to the back of the stem, made a complete word. In the third test, the tasks were mixed. The letters might go either in front or in back of the stem. No cues other than the stem itself were given as to whether the answer was an initial or final letter.

A high score on test 3 was an indicator or a higher level of flexibility in the area of verbal abilities.

3. Perceptual Speed Tests

Each of these tests consisted of 60 items administered in two parts of 30 items each. The time limit for each part was two minutes. Each item consisted of a line of 30 capital block letters. The subject's task was to count the number of times some particular letter appeared. This letter appeared from one to five times in each line. The number of times it occurred was entered directly on the IBM answer sheet.

In the first test in this series, the subject counted the number of N's appearing in each line. In the second test, subject counted the number of W's appearing in each line. In the third test, each line consisted of "M's" "N's" and "W's". At the beginning of each line, the letter to be counted was indicated in parenthesis. The requirements of which letter to look for on each line were mixed.

A high score on the third test was an indication of a higher level of flexibility in the area of perceptual speed.

Reliabilities of each of the tests in the battery of alternation tests is shown in Table IV.

These reliability coefficients were computed on the basis of scores earned on two separately timed administrations of each of the nine tests. Thorndike (42) discusses methods for computing reliabilities of highly speeded tests, as distinct from "power" or level of performance tests with unlimited time. He points out that reliability estimates for such speed tests should not be based on any division of a single administration of the test. The two "part" scores of the single administration would be very nearly identical and the resulting correlation between them would be misleadingly high.

(6) Guilford-Zimmerman Temperament Survey (Appendix C 2)

This questionnaire was developed to assess ten traits of personality. Scores on only five of these traits were used as measures of personality in the present study. These five were: General Activity vs., Inactivity, Slowness; Restraint vs., Impulsiveness; Ascendance vs., Submissiveness; Sociability vs., Shyness; Emotional Stability vs., Neuroticism.

Each trait is appraised in terms of thirty items. Items are stated affirmatively rather than in question form. The subjects responded to each item by marking on an IBM answer sheet under one of the following headings: "YES", "?", "NO". In the present study, the subjects responded to all items on this inventory using either the "YES" or "NO" answer.

Odd-even and split-half reliability estimates for each of the five personality traits were computed for 53 of the 60 persons in the original sample. These reliabilities are shown in Table V. The figures in parenthesis indicate the reliability of the entire test found by using the Spearman-Brown formula (29).

Table VI shows the intercorrelations of the scores on the five personality traits. In general

TABLE V

RELIABILITY ESTIMATES FOR FIVE TRAITS OF PERSONALITY MEASURED BY THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY

Personality Trait	Odd-Even Reliability Estimate		Split-Half Reliability Estimate	
G	.70	(.82)	.55	(.71)
R	.64	(.78)	.48	(.65)
A	.52	(.68)	.58	(.73)
S	.72	(.84)	.66	(.80)
E	.68	(.81)	.69	(.82)

TABLE VI

INTERCORRELATIONS OF SCORES ON FIVE TRAITS OF PERSONALITY MEASURED BY GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY
(N = 53)

	G	R	A	S	E
G					
R	.009				
A	.423	.102			
S	.430	.038	.435		
E	.012	.241	.172	.429	

the intercorrelations are low, indicating there is considerable unique contribution made by each trait. If all the intercorrelations had been high, the five separate scores could not have been used in this study on the grounds that only one personality trait was being measured. Since some of the intercorrelations were low, the scores were used as representing five traits of personality.

The five traits assessed by this instrument are described below. These descriptions are quoted from the Manual of Instructions and Interpretations for the Guilford-Zimmerman Temperament Survey (30).

1. General Activity vs. Inactivity, Slowness

A person scoring high on this trait usually likes a rapid pace of activities rather than a slow and deliberate pace. He prefers keeping in motion rather than pausing to rest; he has a liking for speed, hurrying and quickness of action.

2. Restraint vs. Impulsiveness

A person scoring high on this trait is likely to be restrained and serious in contrast to impulsive. Serious-mindedness, deliberateness, persistent effort and self-control are emphasized by this trait. A person scoring low is characterized as happy-go-lucky, carefree, impulsive, and excitement-loving.

3. Ascendance vs. Submissiveness

Persons with high scores in this area have strong leadership habits, enjoy speaking with individuals and speaking in public; they enjoy persuading others and being conspicuous. A high score indicates social boldness in contrast to submissiveness.

4. Sociability vs. Shyness, Seclusiveness

Persons with high sociability scores have many friends and acquaintances, readily enter into conversations, like social activities, and seek out social contacts. The connotation for people scoring low in this category is "shyness" and "seclusiveness".

5. Emotional Stability vs. Neuroticism

Persons with high score in this area usually are cheerful and optimistic and have evenness of moods, interests and energy. They are not excitable over slight distractions or annoyances, nor do they have perseveration of ideas and moods.

(7) Measures of the Criteria of Teaching Success

Before describing the measures employed as criteria, a brief discussion of certain terms will be presented.

The term "successful" as applied to the teacher has been used in the present study rather than the term "effective". The two terms often are, but need not be used synonymously.

The term "effective" has been used to describe a teacher who provides an atmosphere which fosters desirable growth in pupils. Using this term implies (1) that agreement would have to be reached on what changes in pupils were desirable, and (2) methods for assessing them would have to be determined.

Up to the present time, there is no adequate system for evaluating a teacher's "effectiveness" as defined above.

Success as used in this study, is a broader term and involves the teacher as a friend and counselor of pupils and a member of a community and professional staff. To be successful in this broader sense a teacher must not only be able to provide an atmosphere which fosters desirable growth in pupils but she must be acceptable to her peers, her pupils, the community and the principal of the school in which she teaches.

1. Practice Teaching Grade

These grades are based on two semesters of practice teaching experience, one semester in the major field and one semester in the minor field. Grades are usually awarded on a Superior-Average-Inferior basis using an A, B, C grading system. For purposes of statistical treatment, these grades were transformed to a value scale of A = 13, A- = 12, B+ = 11, B = 10, B- = 9, C+ = 8, C = 7, C- = 6.

2. Placement Bureau Rating

This rating was made by the Assistant Director of the Placement Bureau of the University of Wisconsin. The ratings were based on a variety of information collected by the Placement Bureau office: departmental rating of candidate, transcript, letters of recommendation, biographical statement by candidate, scores on personality and intelligence tests, and information obtained from personal interviews with each teacher. This information is compiled on one data sheet for each candidate.

The Placement Bureau official rated each teacher on a thirteen point scale: 1, 1-, 2+, 2, 2-, 3+, 3, 3-, ... to 5. These ratings were transformed to a value scale of 1 = 13, 1- = 12, 2+ = 11, 2 = 10, 2- = 9, 3+ = 8, ... 5 = 1.

3. Principal's M-Blank Rating Form (Appendix B)

On this form the principal of each teacher was asked to list strengths and weaknesses in the teacher's work and to assign an over-all rating on a five-point scale. The categories on a

five-point scale were: 1 = superior; 2 = above average; 3 = average; 4 = below average; 5 = inferior. These ratings were transformed to the same value scale as that used for the other two criterion ratings: 1 = 13, 2 = 10, 3 = 7, 4 = 4, 5 = 1.

Procedures Followed in Treatment of the Data

Three criterion estimates and twenty measures of certain teacher characteristics are the basic data for this study. The three criterion estimates are: rating by principal, rating by Placement Bureau office, and practice teaching grade. The set of twenty measures of teacher characteristics consists of the following:

1. Four are measures of preservice achievement.
2. Five are measures of personality traits.
3. Two are measures of the disposition rigidity temperament factor obtained by administering the creative effort tests.
4. Three are measures of the flexibility temperament factor obtained by administering the battery of alternation tests.
5. Six of the measures were obtained from tests which were part of the battery of alternation tests.

Two methods are used in analyzing these data:

1. Differences between a group of good teachers and a group of average teachers, as defined by the three criterion estimates, are investigated by means of a multivariate analysis of variance technique (8). By this technique it is possible to determine whether the two groups differ in any or all of three ways:
   a. In terms of a sum of scores made by individuals on the twenty measures;
   b. In terms of classes of measures (preservice achievement measures, temperament measures, and personality measures).

2. Relationships between seven of the twenty measures of teacher characteristics and a composite of the three criterion estimates are investigated by means of the canonical correlation method given by Hotelling (32, 33). Seven variables, selected on the basis of profile differences found to exist between the group of good teachers and the group of average teachers, are included in this study of relationships.

The canonical correlation method was selected because it gives the solution for determining weights to apply to each of the three criterion ratings to combine them into a composite criterion. The weighted composite obtained by this method is a general factor extracted from the matrix of intercorrelations of the three criterion variables. As such, it is possible to describe the factor, or composite, in terms of the relative contribution of the variables.

Thus the advantage of a weighted composite is in being able to identify the variables associated with it. Holzinger (31), and Cumbee and Harris (19), have shown that a simple averaging of a set of criterion ratings may not result in all the ratings being represented in the composite. That a simple averaging of criterion estimates may not be feasible is also pointed out by the studies of Anderson (2) and Erickson (23).

In brief, the procedures to be followed in treating the data are:

1. Two groups of teachers will be formed by dividing the sample of forty-six into an upper half and a lower half on the basis of all three criterion estimates received by each teacher.
2. Raw scores on the twenty measures will be standardized over both groups.
3. A multivariate analysis of variance technique will be applied as a test of significance of differences between the two groups of teachers.
4. Certain variables will be selected from the twenty measures of teacher characteristics on the basis of the results of the analysis of variance. If the groups differ in terms of classes of variables, then classes of variables will be selected for the further study of relationships. If the groups differ in terms of profile, then variables which separate the groups the most will be selected.
5. The canonical correlation between a composite of the three criterion estimates and the selected measures of teacher characteristics will be computed. The weights to form the composite will be given by this computation.

SECTION III

ANALYSIS OF THE DATA—ANALYSIS OF VARIANCE TREATMENT

IN THIS CHAPTER the analysis of the data as treated by the multivariate analysis of variance technique will be presented.

The primary purpose of the present study was to investigate differences between a group of good teachers and a group of average teachers in terms of certain measures of teacher characteristics. While some pre-service achievement measures were employed, the teacher characteristics of most concern in the study were five personality traits and certain aspects of temperament as measured by objective tests.

The analysis of possible group differences was made by a method proposed by Block, Levine and McNemar (8). This was a multivariate

analysis of variance design which permitted differences between the group of good teachers and the group of average teachers to be revealed in any or all of three ways:

1. In terms of sums of scores for individuals;
2. In terms of classes of variables (preservice achievement variables, personality variables, and temperament variables);
3. In terms of a profile of group means on twenty variables.

Forty-six women teachers were the subjects in the investigation. This sample was divided into two equal groups of twenty-three members each on the basis of the three criterion ratings. Those teachers who received the highest ratings were assigned to the upper half; those who received the lowest ratings were assigned to the lower half. All three ratings received by each subject were taken into consideration in separating the sample into the two groups.

Table VII shows the combinations of the three ratings assigned each of the forty-six teachers, and the number of teachers receiving each combination.

From Table VII it is noted that all teachers in the upper group received ratings of superior or above average from all three raters. The range in ratings received by any one person in this group is from 1 to 2. There appears to be agreement among the various raters that these persons are superior and above average teachers. In the present study, this group is designated the group of "good" teachers and is referred to in subsequent tables by the code symbol "Group I."

Table VII shows there is less uniformity among the ratings assigned the teachers in the lower group. The ranges in ratings received by any one person in this group were from 1 to 3, 2 to 3, 2 to 5, 3 to 4, and 3 to 5. One person in the lower group received one rating of superior and two ratings of average; ten persons received one rating of above average with two ratings of average, below average or inferior. Twelve members of the lower group are clearly average or below average teachers in terms of all three ratings. The lower half of the sample is designated the group of "average" teachers in the analysis which follows. The code symbol "Group II" is used to refer to this lower group.

The raw scores on each variable were summed over both groups. The mean and standard deviation of the distribution for each variable were computed. These means and standard deviations were then used in converting the raw scores to standard scores. Raw scores and standard scores for all variables are shown in Appendices E and F.

Standardizing the scores resulted in each of the twenty distributions having a mean of zero and a standard deviation of 1.0. Thus the variance for each variable was equalized.

Equalizing the variance in this way eliminated the variables as a source of variance. When the raw scores were converted to standard scores, the sum of scores on each variable became zero. Since these sums are the basis for computing the mean square deviation for variables, it is obvious that variables as a source of variance would be eliminated.

The standard scores for the two disposition rigidity measures, the Reverse Strokes test and the Alphabets test, were reflected. As indicated earlier in this study, a low score on these two tests indicated better performance while a high score on the remaining eighteen variables indicated the better performance.

The variance table for the analysis of the sums of scores made by individuals, Group I and Group II, and the analysis of the group means on the several variables, Group I and Group II, is presented in Table VIII. The significance of all F ratios found in this study was tested by tables in Edwards (22).

The appropriate test for determining whether or not groups differ in terms of the sum of scores on the twenty measures is the mean square for groups over the mean square for individuals. This ratio is 11.17. For 1 and 44 degrees of freedom, an F of 7.25 is significant at the 1% level. The hypothesis that the two groups do not differ in their grand means, i.e., the means given by pooling the variables within each group, is therefore rejected. The group of good teachers and the group of average teachers are significantly different in terms of the sum of scores made by individuals on all twenty of the preservice, temperament and personality measures.

The separate group means for the several variables are the basis for possible group profiles. The appropriate test for determining whether the profiles differ significantly is the mean square for the group by variable interaction over the mean square for individuals by variable interaction. This ratio is 2.05. For 19 and 836 degrees of freedom an F of 1.89 is significant at the 1% level. The hypothesis that the groups do not differ in the profile of scores is therefore rejected. The group of good teachers is significantly different from the group of average teachers in terms of the profile of scores.

The profile of scores for each group is shown in Figure 1, next page. These profiles were plotted on the basis of the means of the distribution of standard scores for each group on each variable. Since the sum of the standard scores for Group I on each variable and the sum of the standard scores for Group II on each variable were very nearly identical, the absolute values

TABLE VII

COMBINATIONS OF CRITERION RATINGS ASSIGNED THE FORTY-SIX TEACHERS BY THREE RATERS

Combinations of the 3 ratings assigned to each teacher	Number of teachers who received each combination of ratings
1, 1, 1	5
1, 1, 2	1
1, 2, 2	12
2, 2, 2	5
1, 3, 3	1
2, 3, 3	9
2, 4, 5	1
3, 3, 3	10
3, 4, 3	1
3, 5, 3	1
Total Number	46

TABLE VIII

VARIANCE TABLE FOR ANALYSIS OF GRAND MEANS, GROUP I AND GROUP II, AND ANALYSIS OF GROUP MEANS ON THE SEVERAL VARIABLES, GROUP I AND GROUP II

Source	Sum of Squares	d.f.	Mean Square	F
Variables	0	19	0	
Groups	45.3146	1	45.3146	
Individuals	178.4694	44	4.0561	11.1720*
Group × Variables	30.9332	19	1.6281	
Individuals × Variables	664.9632	836	0.7954	2.0469*
Total	919.6160	919		

*Significant beyond the 1% level.

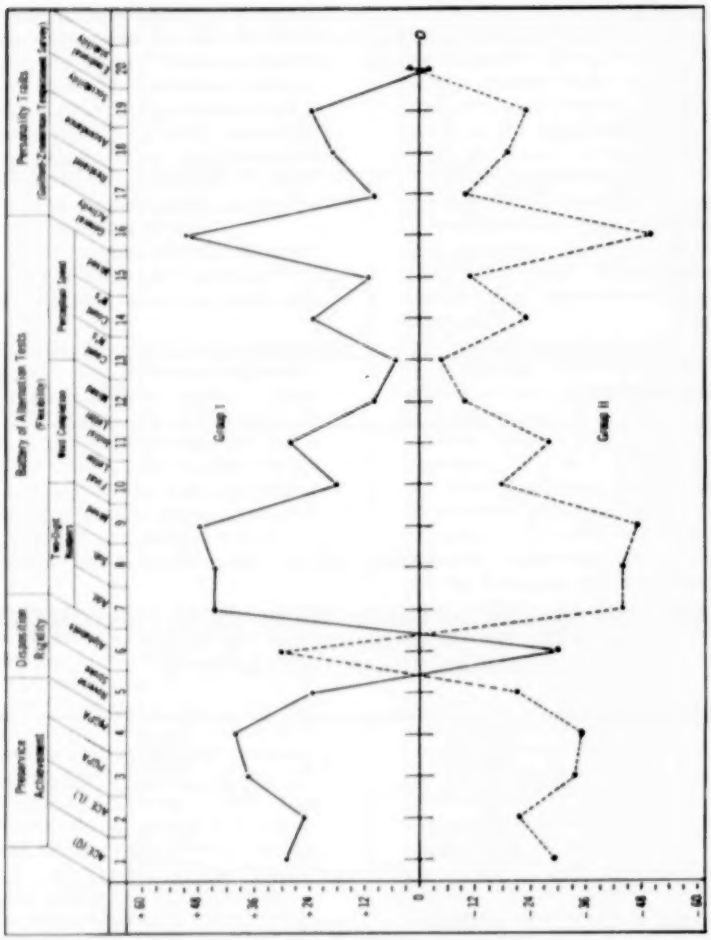

Figure 1. Profile of Group Means for Twenty Variables

of the means were the same for each group on each variable. Thus the profiles were different for the two groups only in terms of their sign, positive or negative. The important consideration in interpreting the profile differences was the distance the groups were separated on each of the variables.

Since a significant difference was found between the groups in terms of profiles, comparisons are made between the group of good teachers and the group of average teachers in terms of the twenty measures. These comparisons are:

1. There appears to be very little difference between the good teachers as compared to the average teachers in terms of emotional stability as measured by the Guilford-Zimmerman Temperament Survey.
2. There does appear to be a great deal of difference between good teachers and average teachers in terms of the General Activity personality trait.
3. Good teachers in comparison to average teachers tend to differ in certain other respects: professional grade point average, major teaching field grade point average, flexibility in numerical abilities and the disposition rigidity temperament factor as measured by the Alphabets Test.

Having found the profile accounted for significant differences between the two groups, the data were further analyzed to determine whether classes of variables (preservice achievement variables, personality variables, and temperament variables) would account for significant differences between the groups.

The solution to this problem involved separating the groups by variable source of variation and the individuals by variable source of variation each into two parts: between classes variation and within classes variation. Statistically this amounted to an extension of the first analysis of variance.

Interaction terms were computed with the variables now considered classes of variables.

Variable I	was comprised of the 4 academic measures.
Variable II	was comprised of the 11 objective measures of temperament.
Variable III	was comprised of the 5 personality measures.

The sums now required for computing the interaction terms were:

1. For groups by between classes—
   Group sums on all variables in each of the three classes (resulting in a 3×2 matrix)
2. For individuals by between classes—
   Sums of scores made by individuals on all variables in each of the three classes (resulting in a 3×23 matrix)

An individuals by between classes interaction term was computed separately for Group I and Group II, and the variances tested for homogeneity before pooling.

The group by between classes interaction was subtracted from the total group by variable interaction (shown in Table VIII) to give the groups by within classes interaction. Individuals by within classes interaction was obtained by a similar method.

A summary of the basic analysis of variance and the extension which analyzes classes of variables as a source of variation, is presented in Table IX.

The appropriate test for determining whether individuals vary significantly with classes of variables is the mean square for individuals by between classes interaction divided by the mean square for individuals by within classes. This ratio is 2.72. For 88 and 748 degrees of freedom an F of 1.49 is significant at the 1% level. The hypothesis of no difference is rejected. Therefore, individuals perform better on some classes of variables than on others.

The ratio of the mean square for groups by between classes interaction over the mean square for individuals by within classes is the appropriate test for determining whether groups differ in terms of classes of variables. This ratio is 1.09. For 2 and 748 degrees of freedom an F ratio of 4.62 is significant at the 1% level. The hypothesis that the groups do not differ in terms of classes of variables is accepted. Therefore, the interaction of groups and classes of variables is not significant.

The results of these last two tests of significance indicate that while there is some evidence individuals vary in terms of classes of variables, there is no evidence the two groups differ in terms of classes of variables.

Summary of Analysis of Variance Treatment of Data

Significant differences were found to exist between the group of good teachers and the group of average teachers in two ways:

1. In terms of the sum of scores made by individuals on the twenty measures;
2. In terms of the profile of scores.

There was some evidence individuals varied in terms of classes of variables but there was no evidence the groups differed in terms of clas-

TABLE IX

SUMMARY OF ANALYSIS OF VARIANCE

Source	Sum of Squares	d.f.	Mean Square
Variables	0	19	0
Groups	45.3146	1	45.3146
Individuals	178.4694	44	4.0561
Classes			
(Groups × Variables)	(30.9332)	(19)	(1.6281)
Groups × between classes	1.4701	2	0.7350
Groups × within classes	29.4631	17	1.7331
(Individuals × Variables)	(664.9623)	(836)	(0.7954)
Individuals × between classes	161.5263	88	1.8329
Individuals × within classes	503.6687	748	0.6734

TABLE X

EXTREME SCORES, RANGES, MEANS AND STANDARD DEVIATIONS OF THE DISTRIBUTION OF SCORES MADE ON THE TEN VARIABLES EMPLOYED IN CANONICAL CORRELATION STUDY (N = 46)

Variable Number	Variable	High Score	Low Score	Range	Mean	Standard Deviation
(3)	Professional Grade Point Average	3.00	1.27	1.73	2.33	00.4522
(4)	Major Teaching Field Grade Point Average	2.73	1.34	1.39	1.98	00.4058
(6)	Alphabets Test	3.35	2.14	1.21	2.52	00.2485
(7)	Two-digit Numbers Addition	108.00	34.00	74.00	67.40	13.7700
(8)	Two-digit Numbers Subtraction	90.00	29.00	61.00	58.54	13.1580
(9)	Two-digit Numbers Mixed	90.00	20.00	61.00	60.08	13.0010
(16)	General Activity	26.00	08.00	18.00	16.58	4.8040
(21)	Practice Teaching Grade	130.00	60.00	70.00	109.57	18.2900
(22)	Placement Bureau Rating	130.00	10.00	120.00	86.30	26.8900
(23)	Principal's M-Blank Rating	130.00	10.00	120.00	92.83	22.7100

ses of variables.

From the results of the analysis of variance, certain conclusions are warranted relative to good and average teachers as defined by ratings assigned by principals, Placement Bureau official and practice teaching supervisor:

1. There is very little difference between good teachers and average teachers in terms of emotional stability as measured by the Guilford-Zimmerman Temperament Survey.
2. Among the five personality traits measures, the greatest difference between good and average teachers is in terms of the General Activity personality trait. There is some difference between the two groups in terms of the Sociability and Ascendance traits as measured by the Guilford-Zimmerman Temperament Survey.
3. Good teachers in comparison to average teachers tend to differ in certain other respects: professional grade point average, major teaching field grade point average, flexibility in numerical abilities, and the disposition rigidity temperament factor as measured by the Alphabets test.

SECTION IV

ANALYSIS OF THE DATA—CANONICAL CORRELATION TREATMENT

THE ANALYSIS of the data in which canonical correlation method was employed will be presented in this section.

Following the analysis of group differences discussed in Section III, a further investigation of the data was made to determine the relationships between seven of the measures of teacher characteristics and a composite of the criterion ratings.

The seven measures employed in the canonical correlation analysis were selected from the original twenty measures on the basis of the profile differences found to exist between the group of good teachers and the group of average teachers. These profiles (Figure 1) show the amount of separation between the groups on each of the twenty measures. The seven variables on which the groups were separated the most were selected to be included in the study of relationships reported in this section.

These seven variables were: (1) professional grade point average; (2) major teaching field grade point average; (3) the Alphabets test (disposition rigidity measure); (4) Two-digit numbers, Addition; (5) Two-digit number, Subtraction; (6) Two-digit number, Mixed (flexibility in the numerical area); and (7) the General Activity personality trait.

The basic data for the canonical correlation analysis were the seven variables listed above and the three criterion estimates: Principal's M-Blank rating, practice teaching grade and Placement Bureau rating. The extreme scores, ranges, means and standard deviations of the distributions of scores on these ten variables are shown in Table X, preceding page.

A model of the canonical correlation method, given by Thomson (60), was followed in the study of relationships between the seven measures of teacher characteristics and a composite of the three criterion estimates.

Before presenting the canonical correlation analysis, a brief description of the method and a statement of the procedures followed will be given.

The canonical correlation is a multiple correlation between two sets of weighted variables. The classical multiple correlation is the situation in which a set of weighted variables is combined to predict only one criterion estimate. This criterion to be predicted in the classical multiple correlation may be one rating or a combination of ratings equally weighted to form one criterion score. The distinction between the classical multiple correlation and the canonical correlation is that in the solution for the canonical correlation, weights are found to apply to the several criterion measures to form a composite.

In brief, the procedures followed in this analysis were:

1. The weights for the criterion variables and the canonical correlation between the two weighted batteries were found by solving the determinantal equation given by Hotelling (32, 33).
2. Weights for the seven measures of teacher characteristics were found by using the usual regression procedures in which the seven measures were predicting the weighted composite of criterion ratings.

A preliminary step in the treatment of the data was to compute Pearson product moment coefficients of correlation as follows:

1. Among the three criterion variables;
2. Among the seven measures of teacher characteristics;
3. Between each of the seven measures and each criterion variable.

These correlations were then arranged in a ten by ten matrix. This matrix was partitioned and the various parts symbolized as shown in Figure 2.

TABLE XI

PARTITIONED CORRELATION MATRIX

	PT	PB	PM	PGPA	MGPA	Sub 7	TDN Add	TDN Sub	TDN Mix	G
PT	1.0	.504	.259	.451	.465	.016	.237	.133	.206	.150
PB	.504	1.0	.629	.500	.488	.236	.463	.353	.388	.436
PM	.259	.629	1.0	.293	.330	.368	.426	.403	.389	.470
PGPA	.451	.500	.293	1.0	.418	.078	.471	.389	.409	.381
MGPA	.465	.488	.330	.418	1.0	.208	.267	.206	.228	.157
Sub 7	.016	.236	.368	.078	.208	1.0	.005	.021	-.015	.262
TDN Add	.237	.463	.426	.471	.267	.005	1.0	.897	.878	.338
TDN Sub	.133	.353	.403	.389	.206	.021	.897	1.0	.900	.393
TDN Mix	.206	.388	.389	.409	.228	-.015	.878	.900	1.0	.313
G	.150	.436	.470	.381	.157	.262	.338	.393	.313	1.0

A	C^T
C	B

Figure 2. Symbols Used to Represent Sets of Correlations

The A matrix represented intercorrelations among the criterion variables. The B matrix represented intercorrelations among the seven measures of teacher characteristics. The C matrix represented correlations of each of the seven measures with each criterion variable. The C^T matrix was the transpose of C.

The partitioned matrix of actual correlations is presented in Table XI. These sets of correlations and intercorrelations, arranged as in Figure 2, were the basic data for the canonical correlation analysis.

The solution for the canonical correlation, as given by Hotelling (32, 33) is the equation

$$\left| C^T B^{-1} C - \lambda A \right| = 0$$

where C^T, B, C and A represent the matrices of intercorrelations shown in Table XI, and λ is the root which makes the equation have zero as its determinant. This root is the square of the canonical correlation, or R_c^2.

The inverse of B was computed, and after the appropriate multiplications the values in the matrix $C^T B^{-1} C$ were found. These two matrices are presented in Table XII and Table XIII.

The matrix $C^T B^{-1} C$ was substituted in the equation $C^T B^{-1} C - \lambda A = 0$ as follows:

$C^T B^{-1} C$ $\qquad\qquad$ λA

.326642	.332436	.181567		$\lambda 1.000$	$\lambda 0.504$	$\lambda 0.259$		
.332436	.486724	.391615	−	$\lambda 0.504$	$\lambda 1.000$	$\lambda 0.629$	= 0	
.181567	[illegible]615	.406062		$\lambda 0.259$	$\lambda 0.629$	$\lambda 1.000$		

The value for λ, or the root for this determinantal equation, was found by trial and error, first taking for λ the square of the largest correlation among the correlations in C and working upward until the sign changed, then interpolating. Following this procedure,

Trial λ = .615505 gave

-.288863	+.022222	+.022151
+.022222	-.128781	+.004462
+.022151	+.004462	-.209443

(minus)
$\triangle$ = -.007614

Trial $\lambda = .496505$ gave

+.169863	+.082198	+.052972
+.082198	-.009781	+.079313
+.052972	+.079313	-.090443

$\triangle$ (plus) = +.000411

Interpolating, λ was found to be .538456. The square root of this value was .734, which is the canonical correlation between the set of weighted criterion variables and the set of seven measures of teacher characteristics.

The standard error for this canonical correlation is $\frac{1}{\sqrt{N - 8 - 1}}$ or .17. Since the obtained correlation is greater than two and one-half times the standard error it can be concluded the true value for R_c is significantly different from zero (43).

Next, the weights for the criterion variables were found by solving equation $[C^T B^{-1} C - \lambda A]\begin{bmatrix} x \\ y \\ z \end{bmatrix} = 0$ under the restriction that $\lambda = .538456$.

The values found by solving this equation with $\lambda = .5384$ were:

-.21184	+.061054	+.042107
+.061054	-.051732	+.052926
+.042107	+.052926	-.132394

$\triangle$ = -.00027216

The cofactors of these values were computed. The ratio in any of the three rows of cofactors were the weights for the criterion variables. The cofactors were:

+.00404785	+.01031174	+.00540962
+.01031174	+.02626990	+.01378127
+.00540962	+.01378127	+.00722997

The ratio in any of these rows of cofactors was: .3925 : 1.000 : .5246 . These values are the weights for the criterion variables.

Weights for the seven measures of teacher characteristics were found by the following sequence of operations: (1) condensing the A matrix using the weights found, (2) normalizing the vector now representing the set of criterion intercorrelations, and (3) performing the usual regression calculations with the seven variables predicting the normalized composite of the criterion variables.

The A matrix was condensed, using the calculated weights, as follows:

	.3925	1.0000	.5246							
.3925	1.0	.504	.259	.451	.465	.016	.237	.133	.206	.150
1.0000	.504	1.0	.629	.500	.488	.236	.463	.353	.388	.436
.5246	.259	.629	1.0	.393	.330	.368	.426	.403	.389	.470
	.451	.500	.393	1.0	.418	.078	.471	.389	.409	.381
	.465	.488	.330	.418	1.0	.208	.267	.206	.228	.157
	.016	.236	.368	.078	.208	1.0	.005	.021	-.015	.262
	.237	.463	.426	.471	.267	.005	1.0	.897	.878	.338
	.133	.353	.403	.389	.206	.021	.897	1.0	.900	.393
	.206	.388	.389	.409	.228	-.015	.878	.900	1.0	.313
	.150	.436	.470	.381	.157	.262	.338	.393	.313	1.0

The condensed values for the A, C and C^T matrices were:

2.5915	.8307	.8436	.4353	.7795	.6166	.6729	.7414
.8307	1.0	.418	.078	.471	.389	.409	.381
.8436	.418	1.0	.208	.267	.206	.228	.157
.4353	.078	.208	1.0	.005	.021	-.015	.262
.7795	.471	.267	.005	1.0	.897	.878	.338
.6166	.389	.206	.021	.897	1.0	.900	.393
.6729	.409	.228	-.015	.878	.900	1.0	.313
.7414	.381	.157	.262	.338	.393	.313	1.0

These condensed values were normalized, using the reciprocal of the square root of 2.5915 as a multiplier on each of the values. The new values were the correlation of the composite with itself and the correlations of each of the seven measures of teacher characteristics with the composite. The correlations of the seven measures with the composite criterion are shown in Table XIV.

The significance of these correlations was tested by the method given in McNemar (43). The standard error with three degrees of freedom was .1525. The obtained correlation was considered significantly different from zero if it was greater than two and one-half times this standard error.

The weights for the seven measures of teacher characteristics were found by post-multiplying B^{-1} by the normalized values in C. These weights are presented in Table XV.

Summary of Analysis of Data—Canonical Correlation Treatment

Relationships between a weighted composite of three criterion ratings and a weighted battery of seven measures of teacher characteristics were investigated by Hotelling's canonical correlation method. Results of this analysis were:

1. The canonical correlation between the weighted composite and the weighted battery of seven measures of teacher characteristics was .73. This correlation was significant at the 1% level.

When the criterion estimates are combined according to the weights found and when a linear combination of the seven measures is made using the weights found, it is possible to predict teaching success from these data in a limited time sense. Prediction from these data is limited because the measures of teacher characteristics employed in this study were obtained at the time the teachers were already on the job. The characteristics measured may have developed as a result of the teaching experiences and might not be present in persons who had not yet taught.

2. Weights for the three criterion estimates were:

Practice teaching grade	+0.392
Placement Bureau rating	+1.000
Placement M-Blank rating	+0.525

Combining these three ratings into a composite using these weights places greater emphasis on the Placement Bureau rating and Principal's M-Blank rating than on the Practice teaching grade.

3. Weights for the seven measures of teacher characteristics, and the correlation of each measure with the weighted composite criterion are presented in Table XVI.

Six of the seven measures of teacher characteristics are significantly correlated with the weighted composite criterion. Of these six, those which correlate highest with the composite are: Major teaching field grade point average; Professional grade point average; Two-digit number, Addition; and the General activity personality trait.

One objective test of temperament, the measure of flexibility in numerical abilities, is significantly correlated with the composite while the other objective test of temperament, a measure of disposition rigidity, is not. This measure of disposition rigidity had the lowest correlation with the composite.

SECTION V

SUMMARY AND CONCLUSIONS

Statement of the Problem

THE PRIMARY purpose of this study was to determine whether a group of good teachers could be differentiated from a group of average teachers in terms of certain measures of preservice achievement, temperament and personality.

TABLE XIV

CORRELATION OF EACH OF THE SEVEN MEASURES OF TEACHER CHARACTERISTICS WITH THE COMPOSITE CRITERION

Variable	Correlation
Professional Grade Point Average	.516*
Major Teaching Field Grade Point Average	.524*
Reverse Strokes Test (Disposition Rigidity)	.270
Two-digit Numbers, Addition	.484*
Two-digit Numbers, Subtraction	.383*
Two-digit Numbers, Mixed (Flexibility)	.418*
General Activity Personality Trait	.461*

*Significant at the 1% level.

TABLE XV

WEIGHTS FOR EACH OF THE SEVEN MEASURES OF TEACHER CHARACTERISTICS

Measure of Teacher Characteristics	Weight
Professional Grade Point Average	+.1418
Major Teaching Field Grade Point Average	+.3714
Reverse Strokes (Disposition Rigidity)	+.1300
Two-digit Numbers, Addition	+.4619
Two-digit Numbers, Subtraction	-.4270
Two-digit Numbers, Mixed (Flexibility)	+.1815
General Activity Personality Trait	+.2776

TABLE XVI

SUMMARY OF WEIGHTS FOR SEVEN MEASURES OF TEACHER CHARACTERISTICS AND THE CORRELATION OF EACH MEASURE WITH THE WEIGHTED COMPOSITE CRITERION

Variable	Weights	Correlation with Composite
Professional Grade Point Average	+.1418	.516*
Major Teaching Field Grade Point Average	+3174	.524*
Alphabets Test (Disposition Rigidity)	+.1300	.270
Two-digit Numbers, Addition	+.4619	.484*
Two-digit Numbers, Subtraction	-.4270	.383*
Two-digit Numbers, Mixed (Flexibility)	+.1815	.418*
General Activity vs., Inactivity	+.2776	.461*

*Significant at the 1% level.

A secondary purpose of the study was to investigate the relationships between a composite of three ratings of teaching success and certain measures of preservice achievement, temperament and personality.

Measures Employed in the Study

Twenty-three measures were employed in the study. These may be classified into four groups as follows:

1. Criterion estimates of teaching success
   (1) Practice teaching grade
   (2) Placement Bureau rating
   (3) Principal's M-Blank rating reported on Wisconsin Adaptation of M-Blank

2. Measures of preservice achievement. These measures were obtained from University of Wisconsin records. The four preservice measures were:
   (1) Quantitative score (expressed in Percentile Rank) American Council on Education Psychological Examination.
   (2) Linguistic score (expressed in Percentile Rank), American Council on Education Psychological Examination.
   (3) Professional grade point average earned in preservice education courses: Education 73, 74, and 75.
   (4) Grade point average earned in courses taken in the major teaching field.

3. Objective measures of temperament. These objective tests of temperament were speed tests designed to measure specific behavior of persons in some standard situation, rather than tests requiring self-evaluation on the part of the subject. Two kinds of objective tests were employed:
   (1) Creative effort tests developed by Cattell as measures of disposition rigidity
      a. Reverse Strokes test
      b. Alphabets test
   (2) Battery of alternation tests developed by Kleemeier and Dudek as measures of flexibility in three areas
      a. Numerical speed
      b. Verbal abilities
      c. Perceptual speed

4. Measures of personality. This group was composed of measures of five traits obtained by administering the Guilford-Zimmerman Temperament Survey. These five traits were:
   (1) General Activity vs. Inactivity, Slowness
   (2) Restraint vs. Impulsiveness
   (3) Ascendance vs. Submissiveness
   (4) Sociability vs. Shyness, Seclusiveness
   (5) Emotional Stability vs. Neuroticism

Design of the Study

Forty-six women teachers in their second, third or fourth year of teaching in Wisconsin secondary schools were the subjects for this study.

This group of forty-six teachers was divided into an upper half and a lower half on the basis of the three criterion estimates. The upper half was designated as Group I, good teachers, and the lower half was designated as Group II, average teachers.

Differences between these two groups in terms of certain measures of preservice achievement, temperament and personality were investigated by a multivariate analysis of variance technique.

Following this analysis of group differences, a study of relationships between a composite of the three criterion ratings and seven of the twenty measures of teacher characteristics was made by a canonical correlation method.

Results of the Study

There was a significant difference between the group of good teachers and the group of average teachers in terms of the profile of group means on the twenty measures of teacher characteristics. The profile differences showed the variables on which the groups differed the most were: (1) professional grade point average, (2) major teaching field grade point average, (3) flexibility in numerical abilities, (4) disposition rigidity as measured by the Alphabets test, (5) the General Activity personality trait.

There was no significant difference between the group of good teachers and the group of average teachers in terms of classes of variables (preservice achievement variables, temperament variables and personality variables).

A significant relationship (canonical correlation of .73) was found between a weighted composite of the three criterion estimates and a weighted combination of seven measures of preservice achievement, temperament and personality. In the weighted composite criterion, greater emphasis was placed on the Placement Bureau rating and Principal's M-Blank rating than on the practice teaching grade. In the combination of seven measures of teacher characteristics, greater emphasis was placed on the major teaching field grade point average; two-digit numbers, addition; and the General Activity personality trait.

Six of the seven measures of teacher characteristics employed in the canonical correlation analysis were significantly correlated with the composite criterion. These six measures were (1) professional grade point average, (2) major teaching field grade point average, (3) two-digit

numbers, addition, (4) two-digit numbers, subtraction, (5) two-digit numbers, mixed, and (6) General Activity trait as measured by the Guilford-Zimmerman Temperament Survey. Of these six measures, those which correlated highest with the composite were the two grade point averages; General Activity personality trait; two-digit numbers, addition; and two-digit numbers, mixed (flexibility in the area of numerical abilities).

Conclusions

The significant differences found between the two groups of teachers seem to indicate that a pattern of measures of preservice achievement, temperament and personality will differentiate good teachers from average teachers as defined by the three criterion estimates employed in this study.

If one wishes to make interpretations from the objective measures of temperament and from the Guilford-Zimmerman Temperament Survey employed in this study, it is possible to compare good teachers with average teachers (as defined by the three criteria) in certain respects.

If these interpretations are made, good teachers would appear to be characterized as liking a rapid pace rather than a slow and deliberate one; they may be further characterized by a liking for quickness of action and production and efficiency. Good teachers appear to be higher academically in terms of both the professional and the major teaching field grade point averages than are average teachers. Good teachers would seem to be more flexible in numerical abilities than average teachers.

A relationship between teaching success as measured by a weighted composite criterion and a linear combination of measures of preservice achievement, temperament and personality seems indicated. This relationship probably cannot be considered predictive of teaching success except in a limited time sense. However, the correlations between the various measures and the weighted composite point out teacher characteristics which it might be profitable to investigate in further studies of the prediction of teaching success.

In further studies in this area, it would appear profitable to more thoroughly explore a greater number of temperament traits as measured by objective tests.

Further studies should be made along the same general lines, using different samples, to validate the relationships found in the present investigation.

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